ORDER NO. HAD8705131C8

Service Manual

Cassette Deck

Dolby B • C NR-Equipped Stereo Double Cassette Deck

RS-X844

DOLBY B·C NR*

Color

(K)...Black Type

Color	Areas
(K)	[E].....All European areas except United Kindom.
(K)	[EK].....United Kingdom.
(K)	[EH].....Holland.
(K)	[EG].....F.R. Germany.
(K)	[XA].....Asia, Latin America, Middle Near East, Africa and Oceania.
(K)	[XL].....Australia.
(K)	[XB].....Saudi Arabia.

SPECIFICATIONS

Deck system Stereo cassette deck
Track system 4-track, 2-channel
Heads
(DECK A) REC/PLAY Solid Permaloy head
Erasing Double-gap ferrite head
(DECK B) PLAY Solid Permaloy head
Motors
(DECK A) Capstan/reel table drive
2 speed electronically controlled DC motor
(DECK B) Capstan/reel table drive
2 speed electronically controlled DC motor
Recording system AC bias
Bias frequency 85kHz
Erasing system AC erase
Tape speed 4.8cm/sec.
Frequency response
METAL 30Hz~17kHz (±15dB)
40Hz~16kHz (DIN)
CrO_2 30Hz~17kHz (±15dB)
40Hz~16kHz (DIN)
NORMAL 30Hz~16kHz (±15dB)
40Hz~15kHz (DIN)

S/N (signal level=max recording level, CrO_2 type tape)
DOLBY C NR on 74dB (CCIR)
DOLBY B NR on 66dB (CCIR)
DOLBY NR off 56dB (A weighted)
Wow and flutter 0.07% (WRMS)
Fast Forward and Rewind Time ±02% (DIN)
Approx. 95 seconds with C-60 cassette tape
Input sensitivity and impedance
LINE 60mV/47kΩ
Output voltage and impedance
LINE 400mV/1.5kΩ
Power consumption 15W
Power supply
For continental Europe AC 50Hz/60Hz, 220V
For others AC 50Hz/60Hz, 110V/127V/220V/240V
Dimensions (W × H × D) 360 × 128 × 295mm
Weight 4.1kg

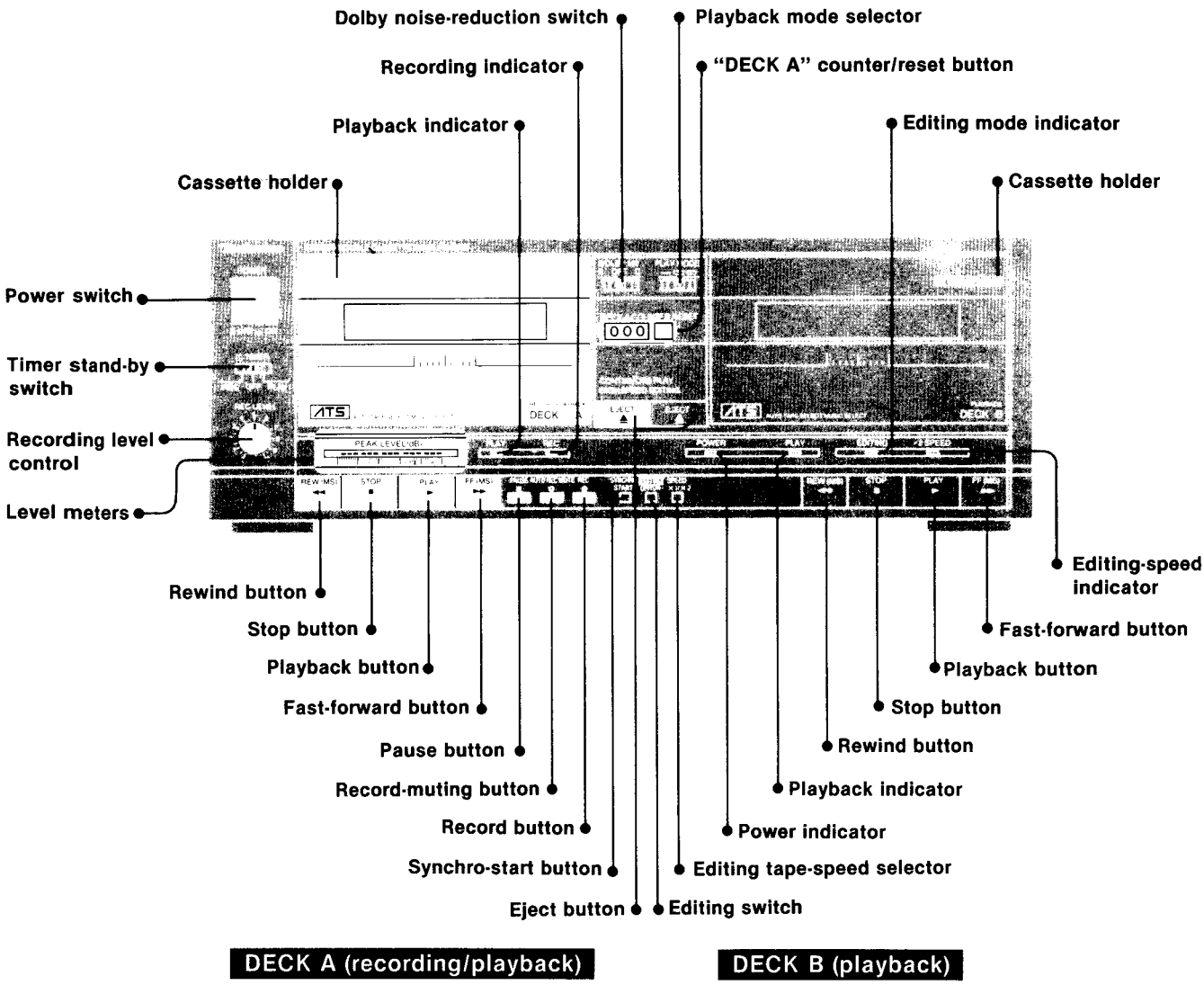
* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

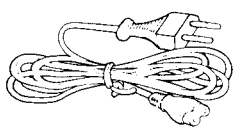
■ CONTENTS

■ LOCATION OF CONTROLS



■ ACCESSORIES

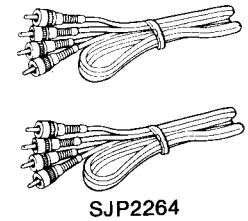
- AC power supply cord . . . 1
- 3-core flat cable 1
- 8-core flat cable 1
- Stereo connection cables . . . 2



SFDAC05E03 [EG] only

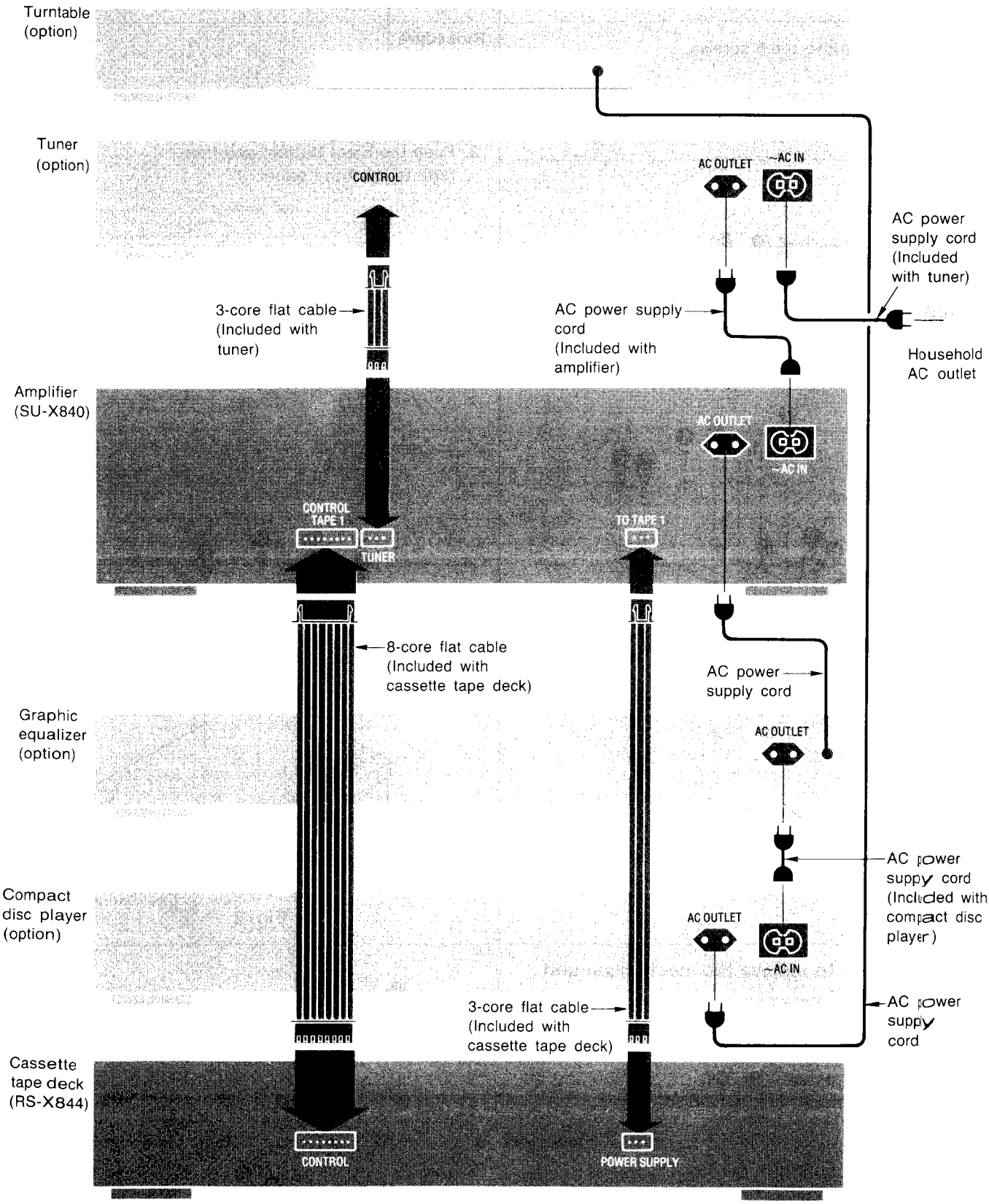
QLGM0488
[E, EH, EK, XL, XA, XB]

SPBM9002



SJP2264

■ HOW TO CONNECTION



■ DISASSEMBLY INSTRUCTIONS

Ref. No. 1	How to remove the cabinet
Procedure 1	• Remove the 6 screws.

Ref. No. 2	How to remove the main P.C.B.
Procedure 1 → 2	

1. Remove the 16 screws (❶~⑯).
2. Remove the Rear panel in the direction of arrow, and then remove the Main P.C.B.

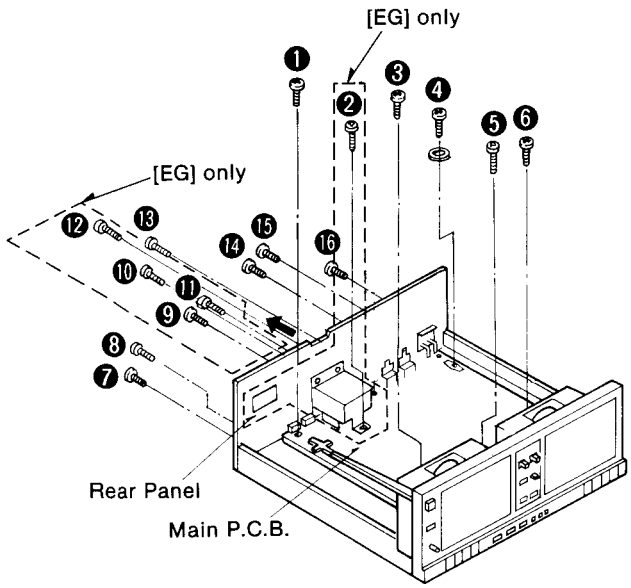


Fig. 1

Ref. No. 3	How to remove the front panel
Procedure 1 → 3	

1. Remove the 7 screws (❶~❼).
2. Remove the spring.
3. Push the Eject button, and then remove the front panel.

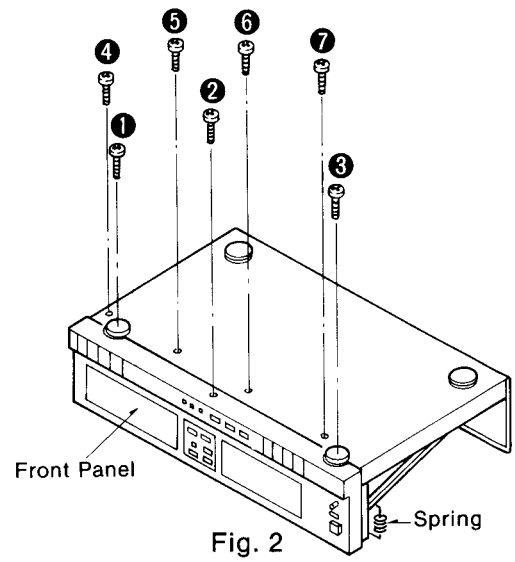


Fig. 2

Ref. No. 4	How to remove the mechanism unit
Procedure 1 → 3 → 4	

1. Remove the 10 screws (❶~⑩).
2. Remove the Counter belt (for DECK A).
3. Remove the Springs.
4. Push the Eject button.
5. Remove the Mechanism (DECK A, B) in the direction of arrow.

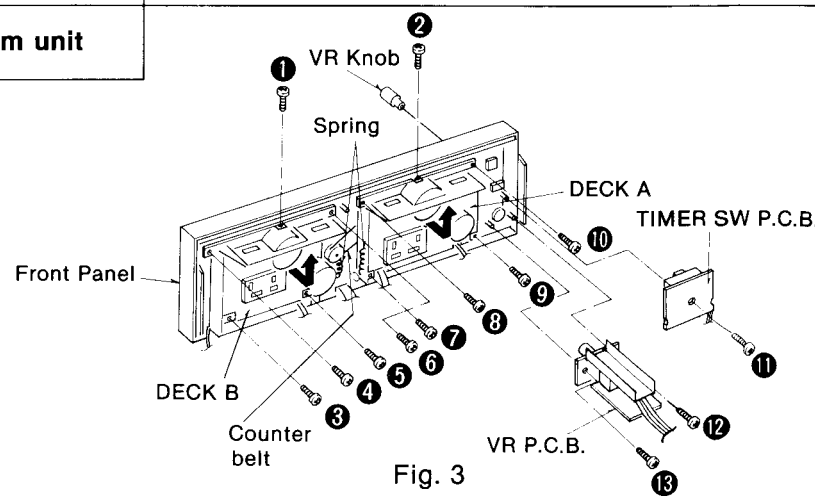


Fig. 3

Ref. No. 5	How to remove the timer sw P.C.B. and VR P.C.B.
Procedure 1 → 5	

1. Remove the one screw (⓫), and then remove the Timer sw P.C.B. (See Fig. 3).
2. Remove the VR knob (See Fig. 3).
3. Remove the 2 screws (⓬, ⓭), and then remove the VR P.C.B. (See Fig. 3).

Ref. No. 6	How to remove the operation sw P.C.B. and NR/Mode sw P.C.B.
Procedure 1 → 3 → 4 → 6	

1. Remove the 3 screws (❶~❸), and then remove the Operation panel.
2. Remove the 5 screws (❹~❽), and then remove the Operation sw P.C.B.
3. Remove the Spacer in the direction of arrow.
4. Remove the one screw (❾), and then remove the NR/Mode sw P.C.B.

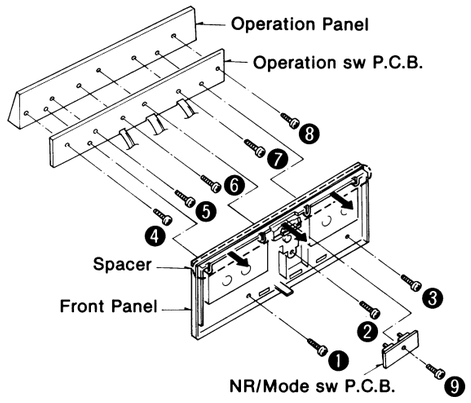


Fig. 4

■ MEASUREMENT AND ADJUSTMENT METHODES

Measurement Condition

- Input level control; Maximum
- Editing switch; Off
- Noise reduction select switch; Off
- Editing tape speed switch; X1
- Timer start switch; Off
- Playback mode selector; ⇄
- Make sure heads are clean
- Make sure capstan and pressure roller are clean
- Judgeable room temperature 20±5°C (68±9°F)

Measuring instrument

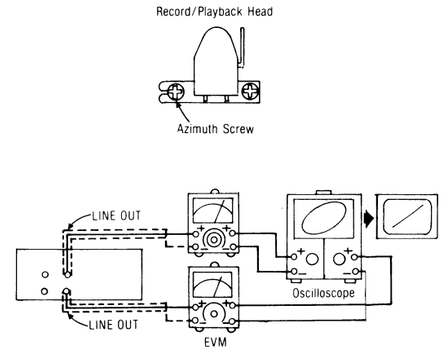
- EVM (Electronic Voltmeter)
- Oscilloscope
- Digital frequency counter
- AF oscillator
- ATT (Attenuator)
- DC voltmeter
- Resistor (600Ω)

Test tape

- Head azimuth adjustment (8kHz, −20dB); QZZCFM
- Tape speed adjustment (3kHz, −10dB); QZZCWAT
- Playback frequency response (315Hz, 12.5kHz, 10kHz, 8kHz, 4kHz, 1kHz, 250kHz, 125kHz, 63kHz, −20dB); QZZCFM
- Playback gain adjustment (315Hz, 0dB); QZZCFM
- Overall frequency response, Overall gain adjustment
  Normal reference blank tape; QZZCRA
  CrO_2 reference blank tape; QZZCRX
  Metal reference blank tape; QZZCRZ

HEAD AZIMUTH ADJUSTMENT

1. Playback the azimuth adjusted part (8kHz, −20dB) of the test tape (QZZCFM) and regulate the angle adjusting screw so that the outputs of L-CH and R-CH are maximlzed.
   (When the adjusting positions are different with L-CH and L-CH, find a position where the outputs of L-CH and R-CH are balanced, and then make the adjustment.)
2. At the same time, obtain a lissajous waveform and eliminate phase deflection.
3. After adjustment, lock the tape guide height and angle adjustment screws.



TAPE SPEED ADJUSTMENT (DECK A, B)

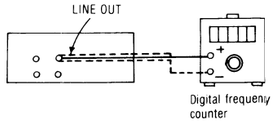
Heigh speed

1. Set the editing tape speed switch to "X2" and ground the Deck B=TP4 and Deck A=TP3
2. Playback the middle part of the test tape (QZZCWAT).
3. Adjust Deck B=904 and Deck A=VR902 so that the output is within the standard.

Normal speed

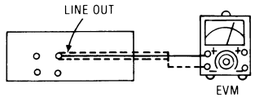
4. Set the editing tape speed with to "X1" and open the Deck B=TP4 and Deck A=TP3.
5. Playback the middle part of the test tape (QZZCWAT).
6. Adjust Deck B=VR903 and Deck A=VR901 so that the outpust is within the standard.

Standard value: 3000^{+15}_{-10}Hz (Normal), 6000±30Hz (High)



PLAYBACK FREQUENCY RESPONSE (DECK A, B)

1. Playback the playback frequency response part (315Hz, 12.5kHz~63Hz, −20dB) of the test tape (QZZCFM).
2. Check that the frequency is within the range shown in Fig. 1 for both L-CH and R-CH.



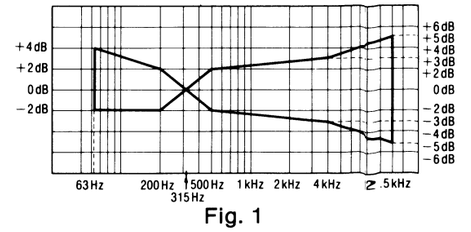
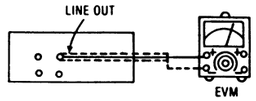


Fig. 1

PLAYBACK GAIN ADJUSTMENT (DECK A, B)

1. Playback the playback gain adjusted part (315Hz, 0dB) of the test tape (QZZCFM).
2. Adjust Deck B=VR1 (L-CH) [[VR4 (R-CH)]] and Deck A=VR3 (L-CH) [[VR2 (R-CH)]] so that the output is within the standard.

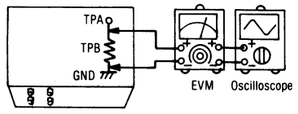
Standard value: 0.4V±0.5dB



ERASE CURRENT ADJUSTMENT (DECK A)

1. Insert a metal tape.
2. Press the record and pause buttons.
3. Adjust VR303 so that the output between TP1 and ground is within the standard.

Standard value: 170±10mA (Metal) (170±10mV)



TPA: TP1
TPB: VR303

OVERALL FREQUENCY RESPONSE (DECK A)

1. Set a normal blank tape (QZZCRA) and record by applying signal (50Hz ~ 10kHz), 20dB attenuated from the reference input level signal (1kHz, −24dB).
2. Playback the signal recorded in step 1, and check that the level of each output frequency is within the range shown in **Fig. 2** in comparison with the reference frequency (1kHz).
3. If it is not within the standard range, adjust the bias current by VR11 (L-CH) and VR12 (R-CH) so that the frequency level is within the standard.
   - Level up in high frequency range ... Increase the bias current.
   - Level down in high frequency range ... Decrease the bias current.
4. After that, increase the signal recorded on CrO_2 blank tape (QZZCRX) and metal blank tape (QZZCRZ) up to 14kHz and adjust in the same way as mentioned above and check that the frequency level is within the range shown in **Fig. 3**.

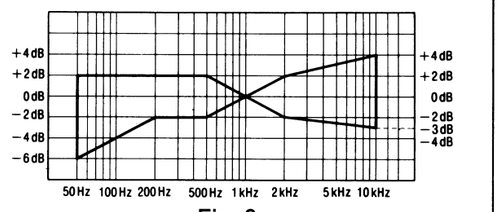


Fig. 2

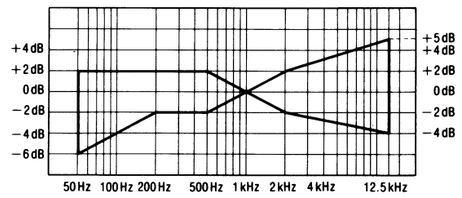
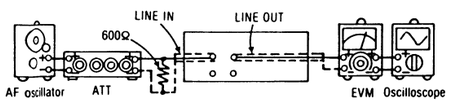


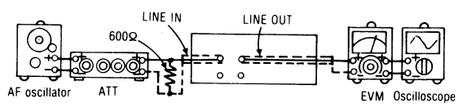
Fig. 3



OVERALL GAIN ADJUSTMENT (DECK A)

1. Set a normal blank tape (QZZCRA) and apply the reference input level signal (1kHz, −24dB) in record pause mode.
2. Adjust the output 0.4V by attenuator and then record.
3. Playback the signal recorded in step 2, and check that the output is within the standard.
4. If it is not within the standard, adjust VR7 (L-CH) and VR8 (R-CH) and repeat the step (1), (2) and (3) until the output is within the standard.

Standard value: 0.4V±0.5dB



DOLBY NR CIRCUIT

1. Set a normal tape and apply 1kHz signal in record pause mode.
2. Adjust by attenuator so that the output between terminal 7 of IC401 (L-CH) [[IC402 (R-CH)]] and ground is 12.3mV.

—Dolby B (Encode characteristic)—

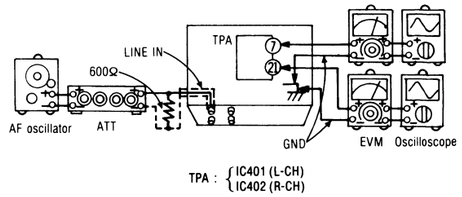
3. Set NR switch to "Dolby B" and change the input signal to 1kHz, 5kHz.
4. Check that the output between terminal 21 of IC401 (L-CH) [[IC402 (R-CH)]] and ground change as specified from the level in NR out mode.

Standard value: 6±2.5dB (1kHz), 8±2.5dB (5kHz)

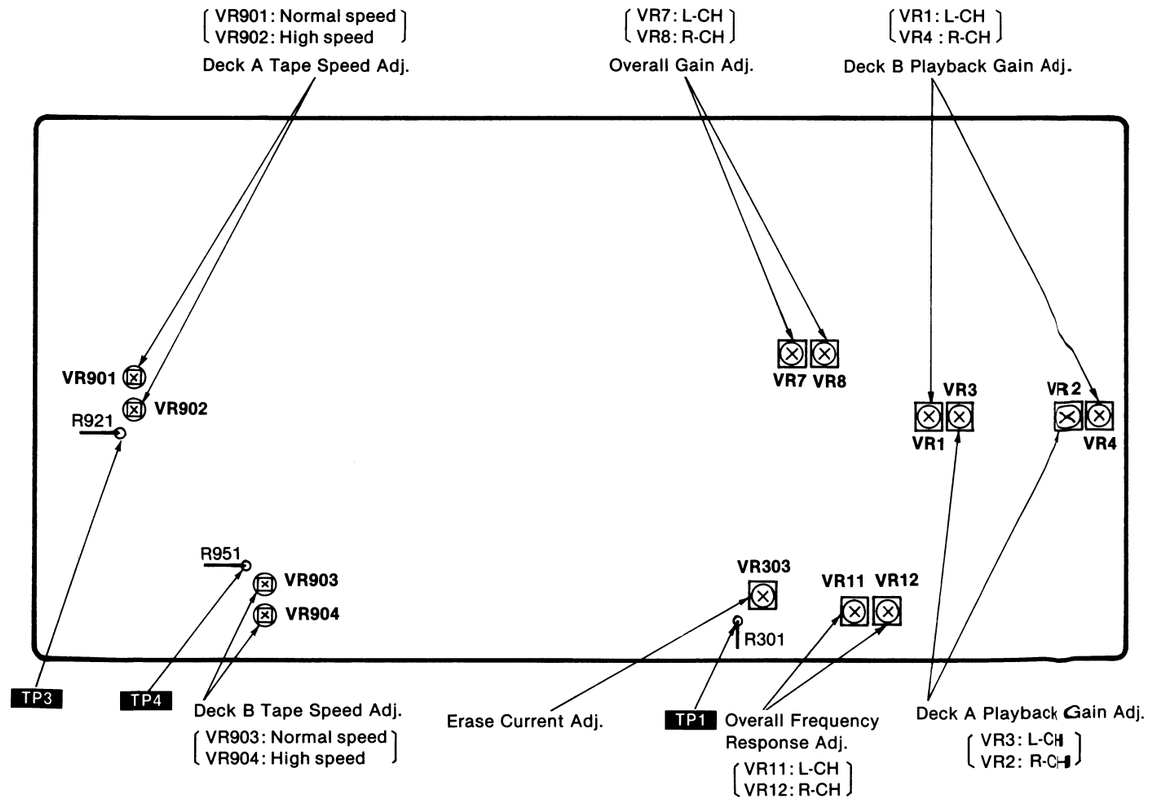
—Dolby C (Encode characteristic)—

5. Set NR switch to "Dolby C" and change the input signal to 1kHz, 5kHz.
6. Check that the output between terminal 21 of IC401 (L-CH) [[IC402 (R-CH)]] and ground change as specified from the level in NR out mode.

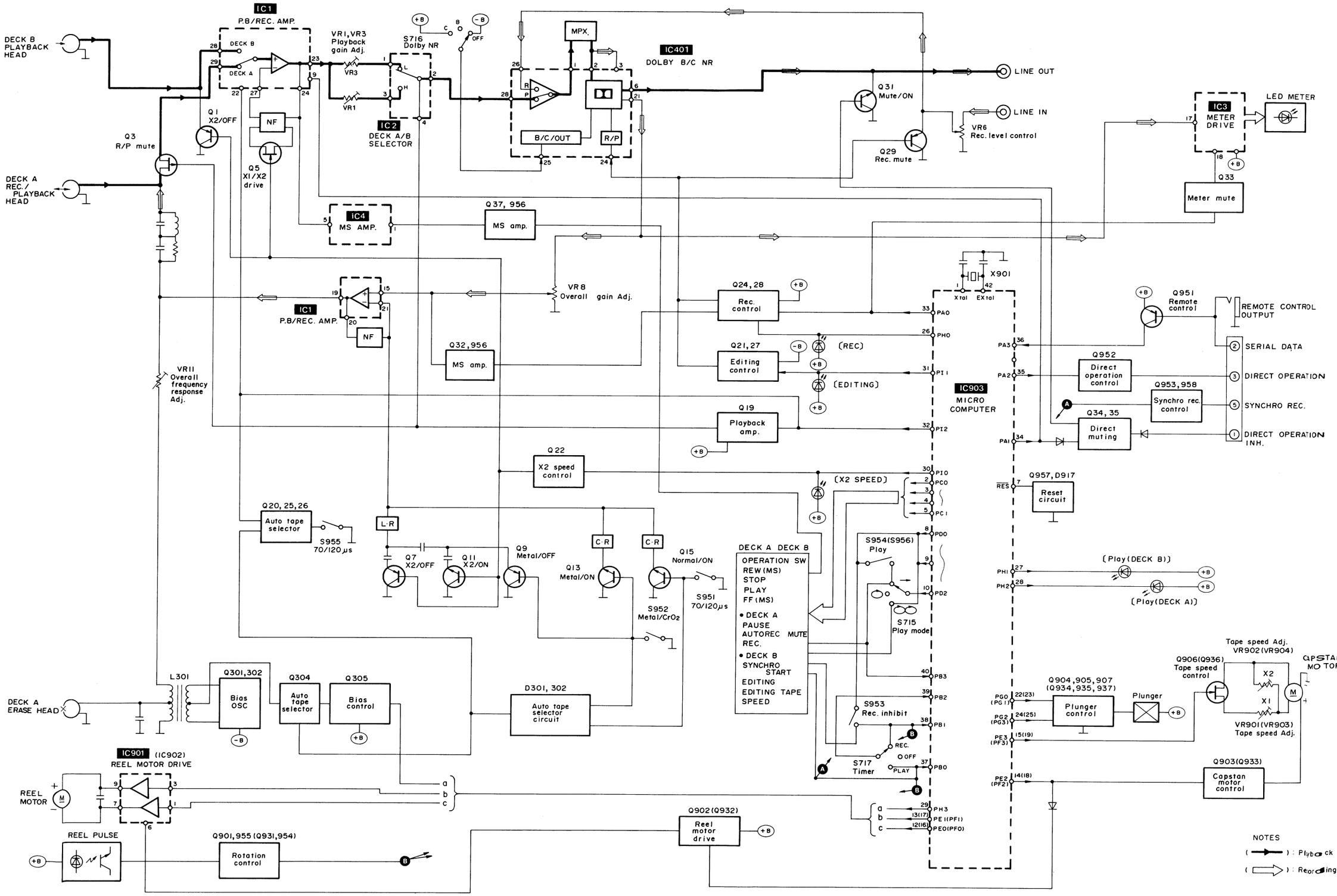
Standard value: 11.5±2.5dB (1kHz), 8.5±2.5dB (5kHz)



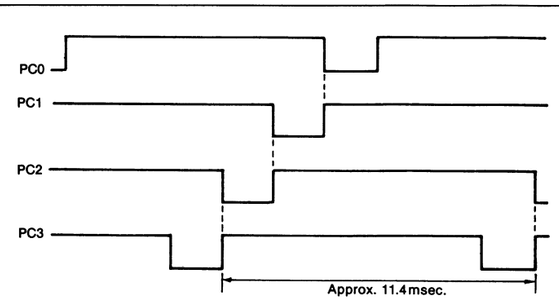
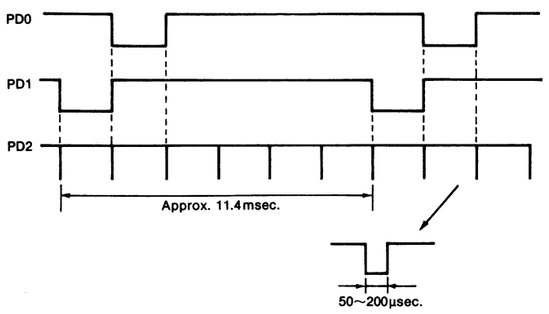
•Adjustment Points

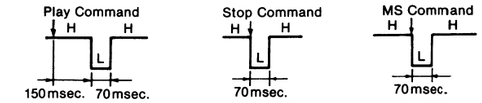
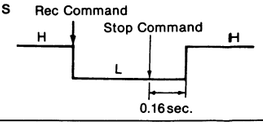
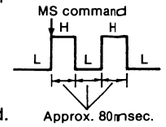
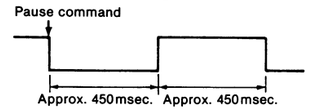
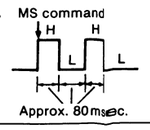


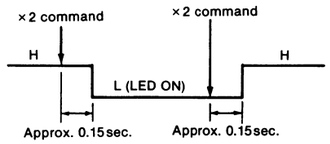
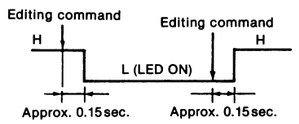
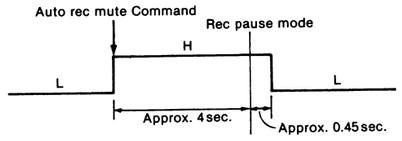
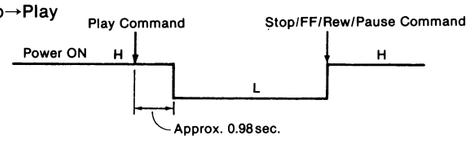
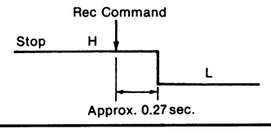
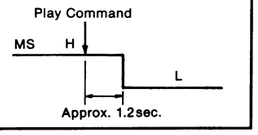
■ BLOCK DIAGRAM

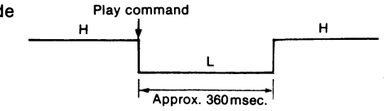


■ MICROCOMPUTER TERMINAL FUNCTION AND WAVEFORM IC903 (LM6402G-2114)

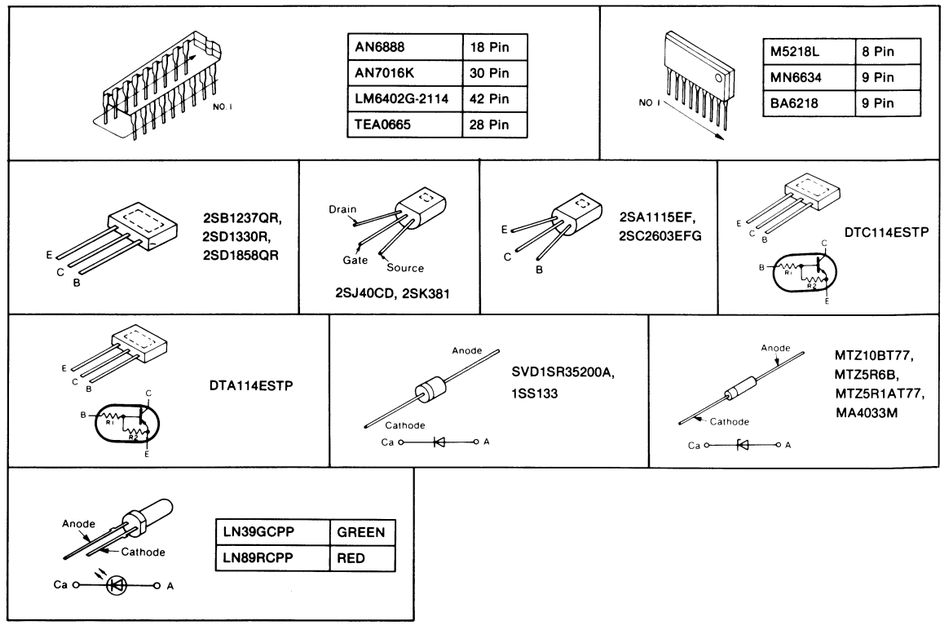
Terminal No.	Symbol	Name	Function/operation
1. 42.	Xtal Extal	Clock osillation	• Clock osillation of Approx. 4MHz.
2. 3. 4. 5.	PC0 PC1 PC2 PC3	Scan output	
6.	$\overline{INT}$	Power off detection	• In power off mode, "H" in direct muting mode.
7.	$\overline{RES}$	Reset terminal	• Used to reset the microcomputer when power is thrown in. • Reset at "L" level.
8. 9. 10.	PD0 PD1 PD2	Scan output	
11.	PD3	——	• Non connection.
12.	PE0	Deck A Reel (FF/REW) motor drive	• "H" in REW mode.
13.	PE1	Deck A Reel (FF/REW) motor drive	• "H" in FF mode.
14.	PE2	Deck A Capstan motor drive	• "H" in Stop, Pause, FF, REW and MS search mode. • "L" in Rec and play mode.
15.	PE3	Deck A Capstan motor speed control	• "H" in Normal speed mode (×1), and "L" in High speed mode (×2).

Terminal No.	Symbol	Name	Function/operation
16.	PF0	Deck B Reel (FF/REW) motor drive	• "H" in REW mode.
17.	PF1	Deck B Reel (FF/REW) motor drive	• "H" in FF mode.
18.	PF2	Deck B Capstan motor drive	• "H" in Stop, FF, REW and MS search mode. • "L" in Play mode.
19.	PF3	Deck B Capstan motor speed control	• "H" in Normal speed mode (×1), and "L" in High speed mode (×2).
20. 21.	TEST V_{SS}	Test terminal GND terminal	• Connection to Ground.
22.	PG0	Deck A Trigger plunger control	• When mechanism mode is changed over, the level goes "L" for short time. Ex.) Stop→Play / Play→Stop / Play→MS 
23.	PG1	Deck B Trigger plunger control	• Same as for Deck A PG0.
24.	PG2	Deck A Cue/Review plunger control	• "L" in Plunger ON mode, and "H" in Plunger OFF mode.
25.	PG3	Deck B Cue/Review plunger control	• Same as for Deck A PG2.
26.	PH0	Deck A Rec indication	• When Rec and Rec pause mode is "L" level, Rec LED light up. • "L" level at Approx. 1sec. after power on in Timer Rec. 
27.	PH1	Deck A Play indication	• When Play mode is "L" level, Play LED light up. • "L" and "H" are repeated at Approx. 80msec. cycle on receiving MS command. • "L" and "H" are repeated at Approx. 450msec. cycle on receiving Pause command.  
28.	PH2	Deck B Play indication	• When Play mode is "L" level, Play LED light up. • "L" and "H" are repeated at Approx. 80msec. cycle on receiving MS command. 
29.	PH3	Deck A Bias OSC control	• "L" in Rec mode only.

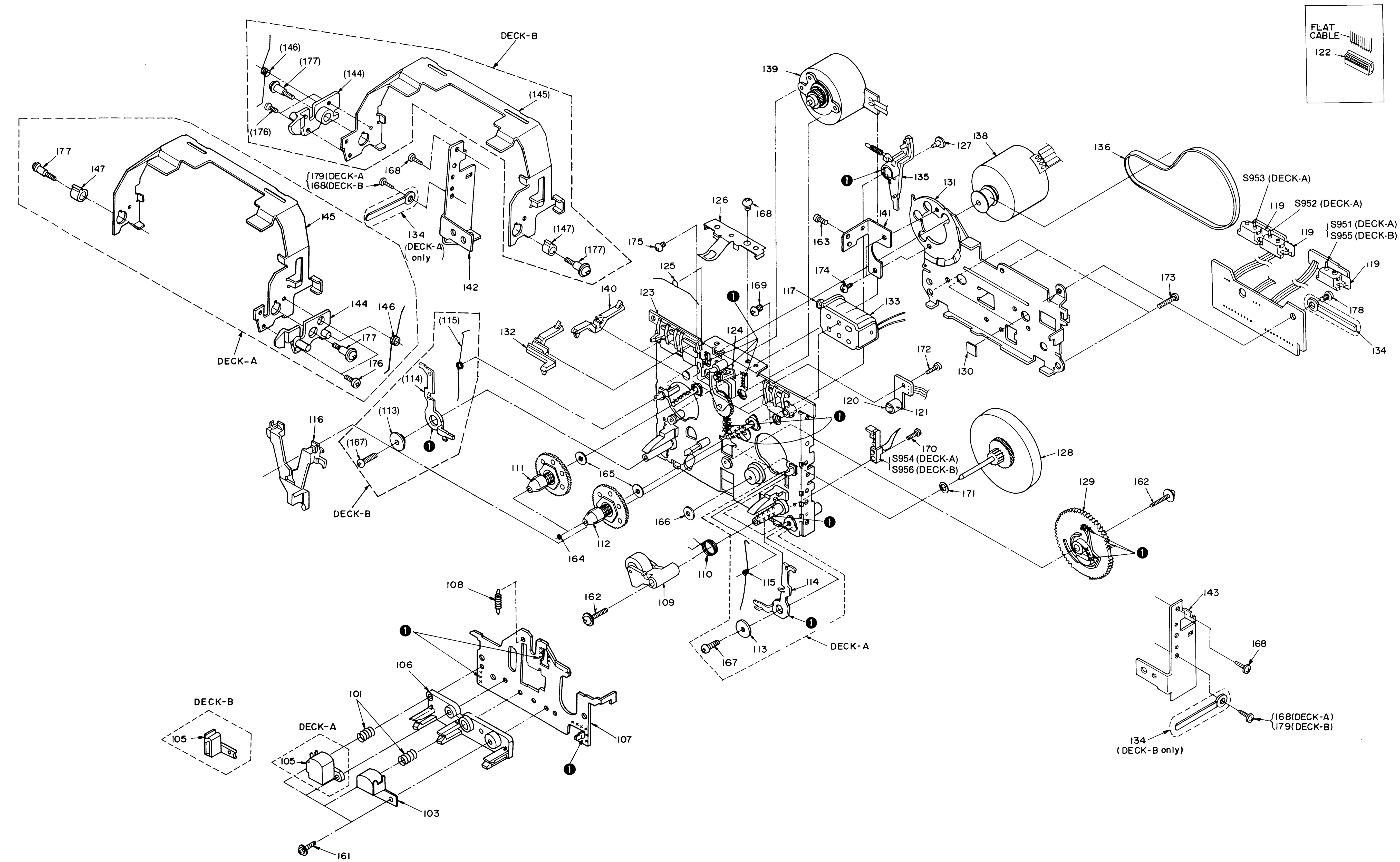
Terminal No.	Symbol	Name	Function/operation
30.	PI0	×2 speed indication	• The level goes "L" ⇄ "H" Approx. 0.15sec. after ×2 speed command. 
31.	PI1	Editing indication	• The level goes "L" ⇄ "H" Approx. 0.15sec. after Editing command. 
32.	PI2	Deck A/Deck B P.B Amp. Select	Deck A • "H" in Play and MS search. • "L" in Stop, Pause, FF, REW, Rec pause and Rec play mode.
33.	PA0	Rec mute/Meter mute	• In Rec pause mode, "H" with Auto rec mute button pressed; "L" with the button released. • In Rec play mode, ① "H" with Auto rec mute button pressed, and Approx. 4sec. later the mode changes to Rec pause, then the level goes "L". ② If Auto rec mute button is pressed for longer than Approx. 4sec., the mode changes to Rec pause and the level goes "L" on releasing the button. ③ When Play button is pressed within Approx. 4sec. after pressing Auto rec Mute button, the mode changes to Rec Play and the level goes "L". 
34.	PA1	Direct muting (DMT)	• Stop→Play  • Stop→Rec Pause  • MS→Play 

Terminal No.	Symbol	Name	Function/operation
35.	PA2	Direct Operation	• In changed over from Stop/FF/Rew/MS mode to Play mode, "L" in Approx. 360msec. period. • Non output in Rec mode and ×2 Editing mode. 
36.	PA3	Remote control signal input terminal	• "L" in non input.
37.	PB0	Scan input	Input switch stage reading • Input of Deck A Auto rec mute, Deck A/B Rew, Synchro rec, MSP, Timer play and Deck B Reel pulse.
38.	PB1		Input switch stage reading • Input of Deck A Pause, Deck A/B FF, ×2 sw, Deck A Rec inh. sw, Timer rec and Deck A Reel pulse.
39.	PB2		Input switch stage reading • Input of Deck A Rec, Deck A/B Stop, Synchro start sw, (Deck A/B Pack sw) and Mode sw "◯◯".
40.	PB3		Input switch stage reading • Input of Deck A/B Play, Editing sw, Deck A/B Play leaf sw and Mode sw "→".
41.	V_{DD}	Power supply terminal	• Operative on Approx. 5 volts.

■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES



■ MECHANICAL PARTS LOCATION



177 (176) (177) 79 (168) 161 (167) 177 176 168 164 (177) 162 165 175 166 167 168 169 163 174 170 172 171 162 173 168 179 178
147 (146) (144) 146 134 142 132 (145) (147) 140 139 141 133 135 131 138 136 (134) 143 134
(105) 105 116 101 (113) 106 (114) 103 (115) 108 111 112 107 123 125 109 110 126 124 113 115 117 114 120 121 127 130 128 129 119 122 119

■ REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Code	Description
(DECK A)			
CASSETTE DECK			
101	SMQA1001	016 726 0827 7	SPRING
103	SJH99	001 270 1700 1	MAGNETIC HEAD
105	SJH100	001 270 1699 7	MAGNETIC HEAD
106	SMQA1002	016 641 0245 3	SPACER
107	SMQA1003	016 630 1752 6	PLATE
108	SMQA1004	016 726 0826 8	SPRING
109	SMQA1005	016 740 0114 1	ROLLER
110	SMQA1006	016 726 0825 9	SPRING
111	SMQA1013	016 913 0004 5	REEL
112	SMQA1026	016 913 0003 6	REEL
113	SMQA1009	016 643 0966 7	SPACER
115	SMQA1120	016 726 0933 6	COIL SPRING
116	SMQA1056	016 718 3358 9	LEVER
117	SMQA1181	003 455 0411 8	PLUNGER
119	SMQA1021	016 643 0965 8	SPACER
120	SMQA1041	001 035 0392 0	PHOTO ELECTRIC TRANSDUCER
121	SMQA1022	016 643 0964 9	SPACER
122	SJT30440LX-V	003 410 6076 8	LUG TERMINAL
122	SJT30640LX-V	003 410 6149 8	CONNECTOR
122	SJT30740LX-V	003 410 5990 7	LUG TERMINAL
122	SJT31040LX-V	003 410 6112 1	LUG TERMINAL
123	SMQA1122	016 630 1806 9	CHASSIS
124	SMQA1061	016 742 0039 5	IDLER PULLEY
125	SMQA1024	016 726 0834 8	SPRING
126	SMQA1062	016 726 0881 1	COIL SPRING
127	SMQA1029	016 640 0459 6	CAP
128	SMQA1066	016 756 0085 3	WHEEL
129	SMQA1123	016 745 0226 9	GEAR
130	SMQA1097	016 643 1004 4	SPACER
131	SMQA1068	016 650 5303 9	BRACKET
132	SMQA1069	016 718 3359 8	LEVER
133	SMQA1070	003 454 0638 6	PLUNGER
134	SMQA1071	016 643 0989 0	WASHER
135	SMQA1028	016 717 0252 5	ARM
136	SMQA1038	016 752 0126 1	FLAT BELT
138	SMQA1125	002 310 2495 4	DC MOTOR
139	SMQA1036	002 310 2270 9	DC MOTOR
140	SMQA1025	016 718 3349 0	LEVER
141	SMQA1126	016 650 5351 1	ANGLE
142	SMQA1127	016 632 1867 6	ANGLE
143	SMQA1128	016 632 1865 8	ANGLE
144	SMQA1130	016 712 0356 3	ROD
145	SMQA1132	016 718 3377 6	LEVER
146	SMQA1134	016 726 0934 5	COIL SPRING
147	SMQA1135	016 643 1021 3	SPACER
SCREWS,WASHERS & NUTS			
161	XSN2+8	005 500 1301 1	SMALL SCREW
162	XTN2+13C	005 501 3505 8	TAPPING SCREW
163	XTS3+6B	005 501 0697 7	SCREW
164	SMQA1010	016 765 0056 7	REEL TABLE
165	SMQA1014	016 641 0246 2	SLIDER
166	SMQA1007	016 862 1041 8	INDICATION PLATE,LABEL
167	XTN3+10	005 501 4763 8	TAPPING SCREW
168	XTN3+4F	005 501 0412 4	TAPPING SCREW
169	XYN26+C3	005 503 0738 5	SCREW
170	XTN2+7C	005 501 3506 7	TAPPING SCREW
171	SMQA1031	005 513 4185 4	WASHER
172	XTN26+6B	005 501 0314 5	SCREW
173	XTN26+8	005 501 3998 5	TAPPING SCREW
174	XYN26+C45	005 503 0928 1	SCREW
175	XYN26+C6	005 503 0554 1	SMALL SCREW
176	XYS2+4B	005 503 1330 1	SCREW WITH WASHER
177	SMQA1136	005 500 7943 9	SCREW
178	XTN3+5F	005 501 3502 1	TAPPING SCREW
179	XTN3+6B	005 501 0432 0	SCREW

Ref. No.	Part No.	Part Code	Description
(DECK B)			
CASSETTE DECK			
101	SMQA1001	016 726 0827 7	SPRING
103	SMQA1184	001 270 1867 9	MAGNETIC HEAD
105	SMQA1186	016 632 1919 1	TAPE GUIDE
106	SMQA1002	016 641 0245 3	SPACER
107	SMQA1003	016 630 1752 6	PLATE
108	SMQA1004	016 726 0826 8	SPRING
109	SMQA1005	016 740 0114 1	ROLLER
110	SMQA1006	016 726 0825 9	SPRING
111	SMQA1013	016 913 0004 5	REEL
112	SMQA1026	016 913 0003 6	REEL
113	SMQA1009	016 643 0966 7	SPACER
114	SMQA1011	016 717 0254 3	ARM
115	SMQA1012	016 726 0835 7	SPRING
116	SMQA1056	016 718 3358 9	LEVER
117	SMQA1181	003 455 0411 8	PLUNGER
119	SMQA1021	016 643 0965 8	SPACER
120	SMQA1041	001 035 0392 0	PHOTO ELECTRIC TRANSDUCER
121	SMQA1022	016 643 0964 9	SPACER
122	SJT30440LX-V	003 410 6076 8	LUG TERMINAL <4P>
122	SJT30640LX-V	003 410 6149 8	CONNECTOR <6P>
122	SJT31040LX-V	003 410 6112 1	LUG TERMINAL <10P>
123	SMQA1122	016 630 1806 9	CHASSIS
124	SMQA1061	016 742 0039 5	IDLER PULLEY
125	SMQA1024	016 726 0834 8	SPRING
126	SMQA1062	016 726 0881 1	COIL SPRING
127	SMQA1029	016 640 0459 6	CAP
128	SMQA1066	016 756 0085 3	WHEEL
129	SMQA1123	016 745 0226 9	GEAR
130	SMQA1097	016 643 1004 4	SPACER
131	SMQA1068	016 650 5303 9	BRACKET
133	SMQA1070	003 454 0638 6	PLUNGER
134	SMQA1071	016 643 0989 0	WASHER
135	SMQA1028	016 717 0252 5	ARM
136	SMQA1038	016 752 0126 1	FLAT BELT
138	SMQA1125	002 310 2495 4	DC MOTOR
139	SMQA1036	002 310 2270 9	DC MOTOR
140	SMQA1025	016 718 3349 0	LEVER
141	SMQA1126	016 650 5351 1	ANGLE
142	SMQA1127	016 632 1867 6	ANGLE
143	SMQA1128	016 632 1865 8	ANGLE
144	SMQA1129	016 712 0357 2	ROD
145	SMQA1131	016 718 3378 5	LEVER
146	SMQA1133	016 726 0935 4	COIL SPRING
147	SMQA1135	016 643 1021 3	SPACER
SCREWS,WASHERS & NUTS			
161	XSN2+8	005 500 1301 1	SMALL SCREW
162	XTN2+13C	005 501 3505 8	TAPPING SCREW
163	XTS3+6B	005 501 0697 7	SCREW
164	SMQA1010	016 765 0056 7	REEL TABLE
165	SMQA1014	016 641 0246 2	SLIDER
166	SMQA1007	016 862 1041 8	INDICATION PLATE,LABEL
167	XTN3+10	005 501 4763 8	TAPPING SCREW
168	XTN3+4F	005 501 0412 4	TAPPING SCREW
169	XYN26+C3	005 503 0738 5	SCREW
170	XTN2+7C	005 501 3506 7	TAPPING SCREW
171	SMQA1031	005 513 4185 4	WASHER
172	XTN26+6B	005 501 0314 5	SCREW
173	XTN26+8	005 501 3998 5	TAPPING SCREW
174	XYN26+C45	005 503 0928 1	SCREW
175	XYN26+C6	005 503 0554 1	SMALL SCREW
176	XYS2+4B	005 503 1330 1	SCREW WITH WASHER
177	SMQA1136	005 500 7943 9	SCREW
178	XTN3+5F	005 501 3502 1	TAPPING SCREW
179	XTN3+6B	005 501 0432 0	SCREW

■ RESISTORS & CAPACITORS

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area.
Parts without these indications can be used for all areas.

Numbering System of Resistor

Example

ERD	25	F	J	102
Type	Wattage	Shape	Tolerance	Value
ERX	2	AN	J	471
Type	Wattage	Shape	Tolerance	Value 47x10¹ (ohm)

Numbering System of Capacitor

Example

ECKD	1H	102	Z	F
Type	Voltage	Value	Tolerance	Peculiarity
ECEA	50	M		330
Type	Voltage	Peculiarity		Value (33x10° microfarad)

Resistor Type	Wattage	Tolerance
ERD : Carbon	10 : 1/8W	J : ±5%
ERG : Metal Oxide	12 : 1/2W	F : ±1%
ERX : Metal Film	25 : 1/4W	G : ±2%
ERQ : Fuse Type Metal	1A : 1W	K : ±10%
ERD□ L : Carbon (chip)	18 : 1/8W	
ERO□ K : Metal Film (chip)	S2 : 1/4W	
ERC : Solid	S1 : 1/2W	
	2F : 1/4W	
	50 : 1/2W	
	2A : 2W	

Capacitor Type	Voltage	Tolerance
ECE : Electrolytic	0J : 6.3V	C : ±0.25pF
ECCD : Ceramic	1A : 10V	J : ±5%
ECKD : Ceramic	1C : 16V	K : ±10%
ECQM : Polyester	1E : 25V	Z : +80% −20%
	1H : 50V	
ECQP : Polyproylene	1V : 35V	P : +100% −0%
	50 : 50V	
ECG : Ceramic	05 : 50V	M : ±20%
ECEA□□□N: Non Polar Electrolytic	2H : 500V	
	2A : 100V	D : ±0.5pF
QCU□ : Ceramic (Chip Type)	1 : 100V	G : ±2%
ECUX : Ceramic (Chip Type)	KC : 400V AC	
ECF : Semiconductor	KC : 125VAC (UL)	
	1J : 63V	
EECW : Liquid electrolyte double layer capcitor		

Ref. No.	Part No.	Part Code
RESISTORS		
R3, R4	ERDS2TJ101	001 152 2421 0
R5, R6	ERDS2TJ274	001 152 2437 2
R7, R8	ERDS2TJ332	001 152 2357 1
R9	ERD25FJ820	001 152 0353 3
R10	ERDS2TJ820	001 152 2453 2
R11, R12	ERDS2TJ302	
R13, R14	ERDS2TJ122	001 152 2423 8
R15, R16	ERDS2TJ302	
R17, R18	ERDS2TJ155	001 152 2766 8
R19	ERD25TJ155	001 152 0451 2
R20	ERDS2TJ155	001 152 2766 8
R21, R22	ERDS2TJ183	001 152 2429 2
R23	ERDS2TJ472	001 152 2362 4
R24	ERDS2TJ103	001 152 2347 3
R26	ERD25FJ472	001 152 0311 3
R27	ERDS2TJ154	001 152 2427 4
R53, R54	ERDS2TJ123	001 152 2424 7
R55, R56	ERDS2TJ223	001 152 2432 7
R57, R58	ERDS2TJ472	001 152 2362 4
R59	ERD25FJ821	001 152 0354 2
R60	ERDS2TJ821	001 152 2454 1
R61, R62	ERDS2TJ100	001 152 2420 1
R63, R64	ERDS2TJ182	001 152 2352 6
R67, R68	ERDS2TJ272	001 152 2354 4
R70	ERDS2TJ223	001 152 2432 7
R71, R72	ERDS2TJ472	001 152 2362 4
R73	ERD25FJ682	001 152 0343 5
R74, R75	ERDS2TJ103	001 152 2347 3
R76, R77	ERDS2TJ472	001 152 2362 4
R78	ERDS2TJ472	001 152 2362 4
R79, R80	ERDS2TJ103	001 152 2347 3
R81	ERDS2TJ103	001 152 2347 3
R82	ERDS2TJ473	001 152 2363 3
R83	ERDS2TJ222	001 152 2353 5
R84	ERDS2TJ272	001 152 2354 4
R86	ERD25FJ103	001 152 0216 1
R87	ERDS2TJ103	001 152 2347 3
R88	ERDS2TJ332	001 152 2357 1
R89, R90	ERG2SJ560	001 151 4932 9
R91, R92	ERDS2TJ223	001 152 2432 7
R93	ERDS2TJ102	001 152 2346 4
R101, R102	ERDS2TJ223	001 152 2432 7
R103, R104	ERD25TJ123	001 152 2077 6
R105, R106	ERDS2TJ272	001 152 2354 4
R107	ERDS2TJ272	001 152 2354 4
R108	ERDS2TJ101	001 152 2421 0
R109	ERDS2TJ223	001 152 2432 7
R110	ERDS2TJ393	001 152 2440 7
R111	ERDS2TJ472	001 152 2362 4
R112	ERDS2TJ332	001 152 2357 1
R113, R114	ERDS2TJ333	001 152 2358 0
R120	ERDS2TJ154	001 152 2427 4
R121	ERDS2TJ473	001 152 2363 3
R301	ERD25FJ1R0	001 152 0208 1
R302, R303	ERDS2TJ223	001 152 2432 7
R305, R306	ERDS2TJ100	001 152 2420 1
R307	ERD2FCG100	001 152 0185 1
R308	ERDS2TJ331	001 152 2356 2
R309	ERDS2TJ821	001 152 2454 1
R310	ERDS2TJ471	001 152 2361 5
R311	ERDS2TJ561	001 152 2364 2
R312	ERD25FJ151	001 152 0236 7
R313	ERDS2TJ562	001 152 2445 2
R314	ERDS2TJ473	001 152 2363 3
R315, R316	ERDS2TJ103	001 152 2347 3
R317, R318	ERDS2TJ103	001 152 2347 3
R319, R320	ERDS2TJ563	001 152 2446 1
R401, R402	ERDS2TJ101	001 152 2421 0
R403, R404	ERDS2TJ272	001 152 2354 4
R405, R406	ERDS2TJ472	001 152 2362 4
R407, R408	ERD25FJ471	001 152 0310 4
R409, R410	ERDS2TJ332	001 152 2357 1
R411, R412	ERDS2TJ102	001 152 2346 4
R413, R414	ERDS2TJ512	001 152 2596 8
R415, R416	ERDS2TJ222	001 152 2353 5
R417, R418	ERDS2TJ683	001 152 2450 5
R419, R420	ERDS2TJ333	001 152 2358 0
R421, R422	ERDS2TJ823	001 152 2456 9
R423, R424	ERDS2TJ823	001 152 2456 9
R425, R426	ERDS2TJ103	001 152 2347 3
R427, R428	ERD25FJ182	001 152 0248 3
R602	ERDS2TJ471	001 152 2361 5
R603	ERD2FCG100	001 152 0185 1
R604	ERDS2TJ471	001 152 2361 5
R605	ERDS2TJ102	001 152 2346 4
R606	ERD2FCG270	001 152 2725 7
R607	ERD25FJ102	001 152 0215 2
R610	ERDS2TJ391	001 152 2360 6
R702	ERDS2TJ122	001 152 2423 8
R703, R704	ERDS2TJ821	001 152 2454 1
R705, R706	ERDS2TJ122	001 152 2423 8
R707	ERDS2TJ122	001 152 2423 8
R901, R902	ERDS2TJ103	001 152 2347 3
R903	ERD25FJ103	001 152 0216 1
R904	ERD25FJ562	001 152 0328 4
R905	ERDS2TJ471	001 152 2361 5
R906	ERD25TJ223	001 152 1863 2
R907, R908	ERG3SJ680P	001 151 7263 1
R909	ERDS2TJ391	001 152 2360 6
R910	ERD25FJ682	001 152 0343 5
R911	ERDS2TJ273	001 152 2436 3
R912	ERDS2TJ223	001 152 2432 7
R913	ERDS2TJ103	001 152 2347 3
R914	ERDS2TJ821	001 152 2454 1
R915	ERDS2TJ103	001 152 2347 3
R916	ERDS2TJ821	001 152 2454 1
R917	ERDS2TJ103	001 152 2347 3
R918	ERDS2TJ222	001 152 2353 5
R919	ERG2SJ330	001 151 4037 1
R920	ERDS2TJ272	001 152 2354 4
R921	ERD25TJ105	001 152 0446 9
R931, R932	ERDS2TJ103	001 152 2347 3
R933	ERDS2TJ103	001 152 2347 3
R934	ERDS2TJ562	001 152 2445 2
R935	ERDS2TJ471	001 152 2361 5
R936	ERDS2TJ223	001 152 2432 7
R937, R938	ERG3SJ680P	001 151 7263 1
R939	ERD25FJ391	001 152 0299 2
R940	ERDS2TJ682	001 152 2365 1
R941	ERDS2TJ273	001 152 2436 3
R942	ERDS2TJ223	001 152 2432 7
R943	ERDS2TJ103	001 152 2347 3
R944	ERDS2TJ821	001 152 2454 1
R945	ERDS2TJ103	001 152 2347 3
R946	ERDS2TJ821	001 152 2454 1
R947	ERDS2TJ103	001 152 2347 3
R948	ERDS2TJ222	001 152 2353 5
R949	ERG	
R950	ERD	
R951	ERD	
R953	ERD	
R954	ERD	
R955, R956	ERD	
R957	ERD	
R958	ERD	
R959	ERD	
R960	ERD	
R961	ERD	
R962	ERD	
R963, R964	ERD	
R965, R966	ERD	
R967	ERD	
R968, R969	ERD	
R970, R975	ERD	
R976	ERD	
R977	ERD	
R978	ERD	
R979	ERD	
CAPACITORS		
C1, C2	ECK	
C3, C4	ECK	
C5, C6	ECK	
C7, C8	ECK	
C9, C10	ECE	
C11, C12	ECQ	
C13, C14	ECE	
C15, C16	ECC	
C51, C52	ECE	

olerance

: ±5%
: ±1%
: ±2%
: ±10%

lerance

±0.25pF
±5%
±10%
-80%
-20%
-100%
-0%
±20%

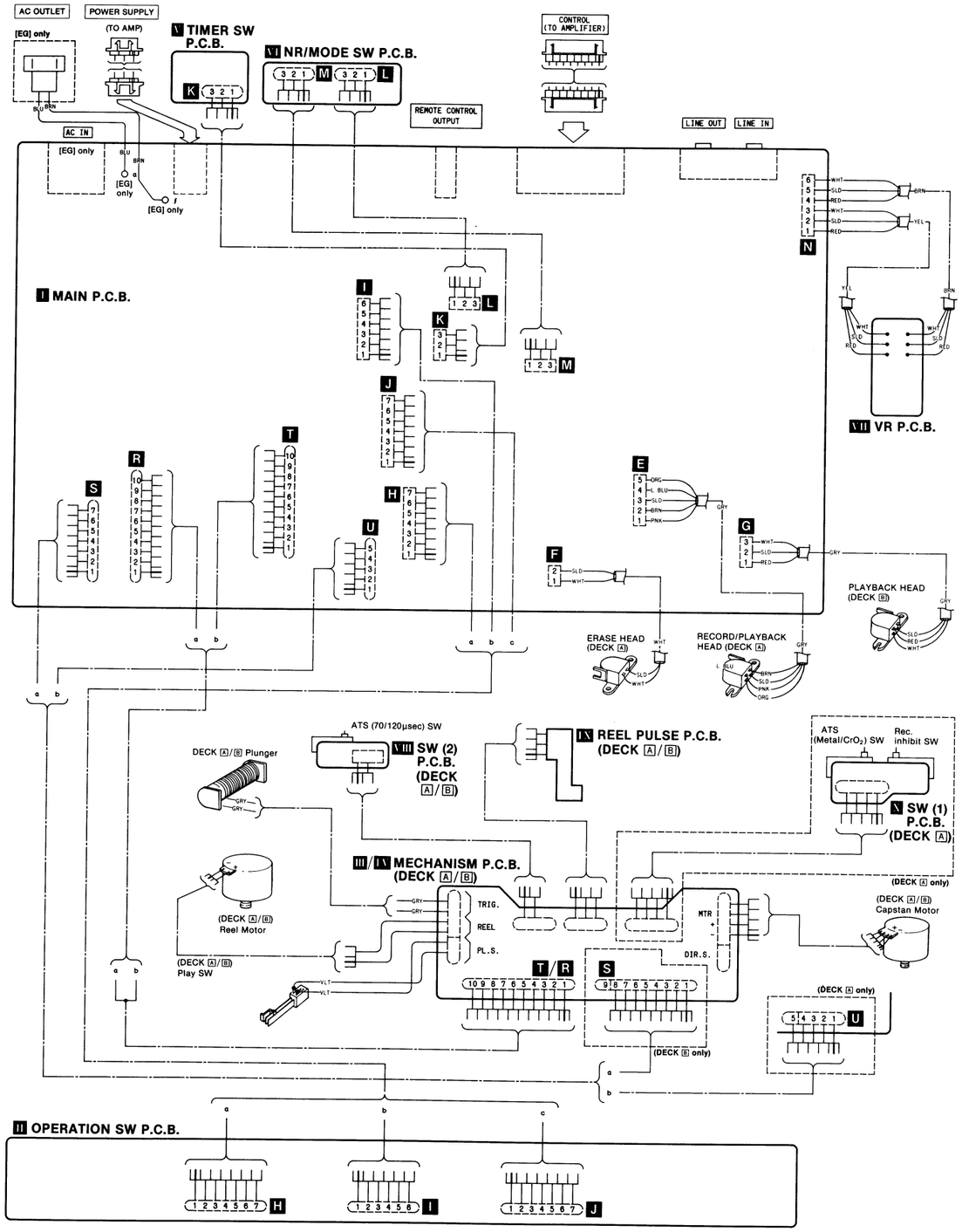
±0.5pF
±2%

Ref. No.	Part No.	Part Code
R949	ERG2SJ330	001 151 4037 1
R950	ERDS2TJ272	001 152 2354 4
R951	ERD25TJ105	001 152 0446 9
R953	ERDS2TJ103	001 152 2347 3
R954	ERDS2TJ472	001 152 2362 4
R955, R956	ERDS2TJ223	001 152 2432 7
R957	ERDS2TJ102	001 152 2346 4
R958	ERDS2TJ222	001 152 2353 5
R959	ERDS2TJ332	001 152 2357 1
R960	ERDS2TJ103	001 152 2347 3
R961	ERDS2TJ683	001 152 2450 5
R962	ERDS2TJ105	001 152 2422 9
R963, R964	ERDS2TJ473	001 152 2363 3
R965, R966	ERDS2TJ473	001 152 2363 3
R967	ERDS2TJ472	001 152 2362 4
R968, R969	ERDS2TJ103	001 152 2347 3
R970, R975	ERDS2TJ332	001 152 2357 1
R976	ERDS2TJ103	001 152 2347 3
R977	ERD25TJ223	001 152 1863 2
R978	ERDS2TJ103	001 152 2347 3
R979	ERDS2TJ472	001 152 2362 4
CAPACITORS		
C1, C2	ECKD1H391KB	001 103 1544 9
C3, C4	ECKD1H331KB	001 103 1523 4
C5, C6	ECKD1H122KB	001 103 1459 5
C7, C8	ECKD1H391KB	001 103 1544 9
C9, C10	ECEA0JU101	001 120 2829 8
C11, C12	ECQM1H123JZ	001 106 0688 3
C13, C14	ECEA1HUR47	001 120 3249 8
C15, C16	ECCD1H050CC	001 103 0251 3
C51, C52	ECEA1HU010	001 120 2842 1
C53, C54	ECKD1H471KB	001 103 1551 0
C55, C56	ECCF1H121J	001 103 0378 9
C57, C58	ECCF1H121J	001 103 0378 9
C59, C60	ECEA1HUR47	001 120 3249 8
C61, C62	ECQM1H392JZ	001 106 0790 6
C63, C64	ECQM1H223JZ	001 106 0739 9
C65, C66	ECQM1H103JZ	001 106 0667 8
C67, C68	ECQM1H333JZ	001 106 0779 1
C69, C70	ECQM1H153JZ	001 106 0704 0
C81, C82	ECCC1H221K	001 103 0508 7
C83, C84	ECEA1EU4R7	001 120 2840 3
C89	ECEA1CU221	001 120 2833 2
C90	ECEA0JU222	001 120 3161 5
C91, C92	ECEA1HU2R2	001 120 3253 2
C99, C100	ECKD1H103ZF5	
C101	ECQM1H103JZ	001 106 0667 8
C102	ECEA1CU100	001 120 2905 3
C103	ECCF1H121J	001 103 0378 9
C104	ECEA1HU010	001 120 2842 1
C120	ECEA1HU2R2	001 120 3253 2
C121 ⚠	ECKD1H223PF	001 103 1510 9
C301	ECQP1153JZW	001 106 3505 3
C302	ECQM1H392JZ	001 106 0790 6
C303, C304	ECQM1H472JZ	001 106 0801 0
C305	ECQM1H472JZ	001 106 0801 0
C306, C307	ECEA1EU4R7	001 120 2840 3
C308	ECKD1H103ZF5	
C401, C402	ECKD1H152KB	001 103 1467 5
C403, C404	ECKD1H122KB	001 103 1459 5
C405, C406	ECCF1H121J	001 103 0378 9
C407, C408	ECQM1H103JZ	001 106 0667 8
C409, C410	ECQM1H472JZ	001 106 0801 0
C411, C412	ECQM1H472JZ	001 106 0801 0
C413, C414	ECEA1CU100	001 120 2905 3
C415, C416	ECEA1CU100	001 120 2905 3
C417, C418	ECQM1H473JZ	001 106 0810 9
C419, C420	ECQM1H473JZ	001 106 0810 9
C421, C422	ECEA1HUR22	001 120 3247 0
C423, C424	ECEA1HUR22	001 120 3247 0
C425, C426	ECEA50ZR68	001 120 1290 5
C427, C428	ECEA50ZR68	001 120 1290 5
C429, C430	ECEA1EU4R7	001 120 2840 3
C431, C432	ECEA1EU4R7	001 120 2840 3
C433, C434	ECEA1EU4R7	001 120 2840 3
C601 [EG] ⚠	ECKDKC103PF2	001 103 3734 7
C602	ECEA1CU472	001 120 0288 3
C603	ECEA1CU222	001 120 3074 3
C604 ⚠	ECKD1H223PF	001 103 1510 9
C605, C606	ECEA1CU221	001 120 2833 2
C607	ECEA1CU222	001 120 3074 3
C608, C610 ⚠	ECKD1H223PF	001 103 1510 9
C611 ⚠	ECKD1H223PF	001 103 1510 9
C612	ECEA0JU101	001 120 2829 8
C613	ECEA1CU221	001 120 2833 2
C614 ⚠	ECKD1H223PF	001 103 1510 9
C617	ECEA1CU100	001 120 2905 3
C901, C902	ECEA1CN100S	001 120 0233 8
C903	ECEA1EU4R7	001 120 2840 3
C904	ECEA1HU2R2	001 120 3253 2
C905	ECCD1H220KC	001 103 0494 6
C906	ECCD1H390J	001 103 0587 2
C907	ECKD1H103ZF5	

art Code

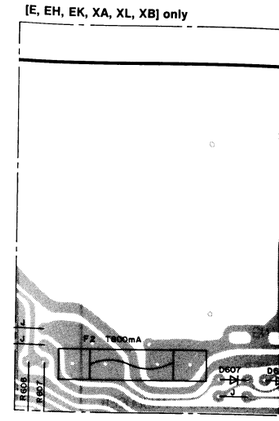
152 2346 4
152 2725 7
152 0215 2
152 2360 6
152 2423 8
152 2454 1
152 2423 8
152 2423 8
152 2347 3
152 0216 1
152 0328 4
152 2361 5
152 1863 2
151 7263 1
152 2360 6
152 0343 5
152 2436 3
152 2432 7
152 2347 3
152 2454 1
152 2347 3
152 2454 1
152 2347 3
152 2353 5
151 4037 1
152 2354 4
152 0446 9
152 2347 3
152 2347 3
152 2445 2
152 2361 5
152 2432 7
151 7263 1
152 0299 2
152 2365 1
152 2436 3
152 2432 7
152 2347 3
152 2454 1
152 2347 3
52 2454 1
52 2347 3
52 2353 5

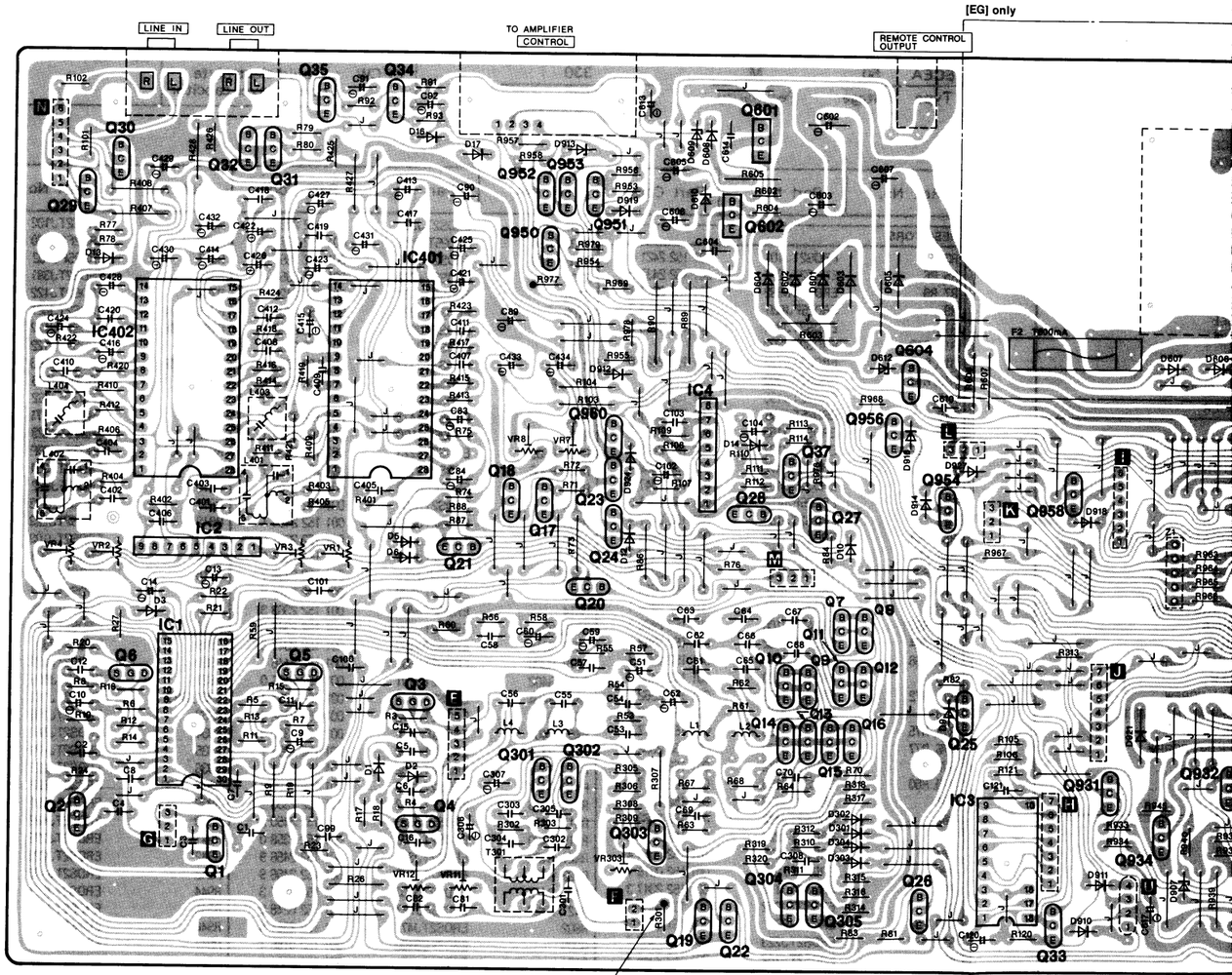
■ WIRING CONNECTION DIAGRAM



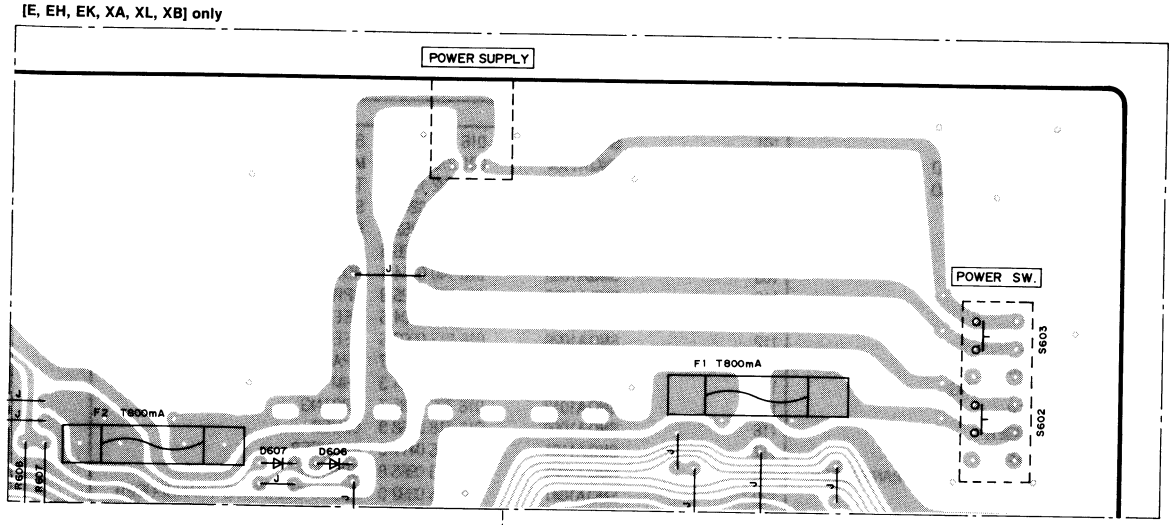
■ PRINTED CIRCUIT BOARDS

I MAIN P.C.B.

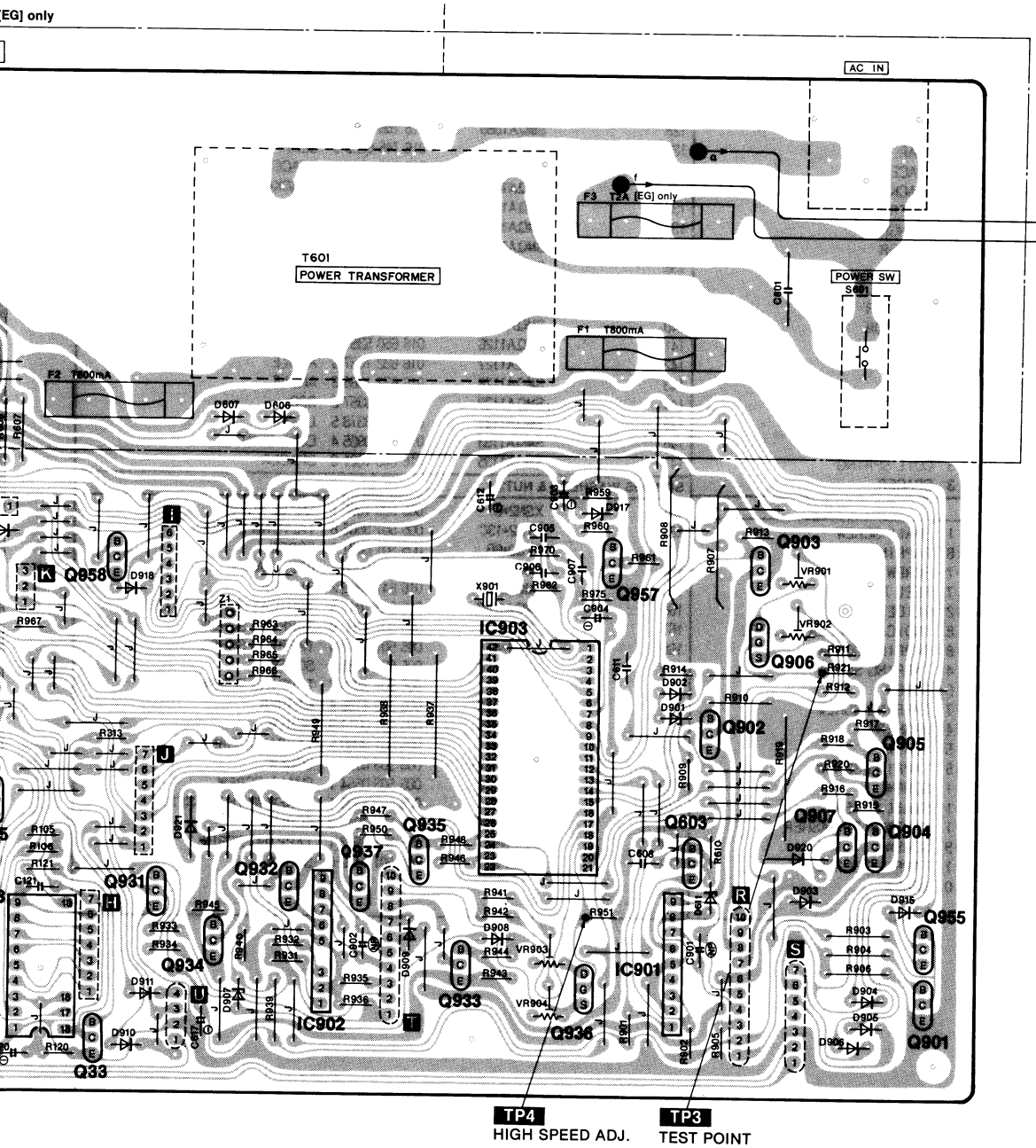




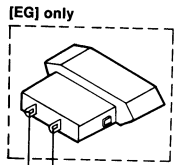
[E, EH, EK, XA, XL, XB] only



[EG] only



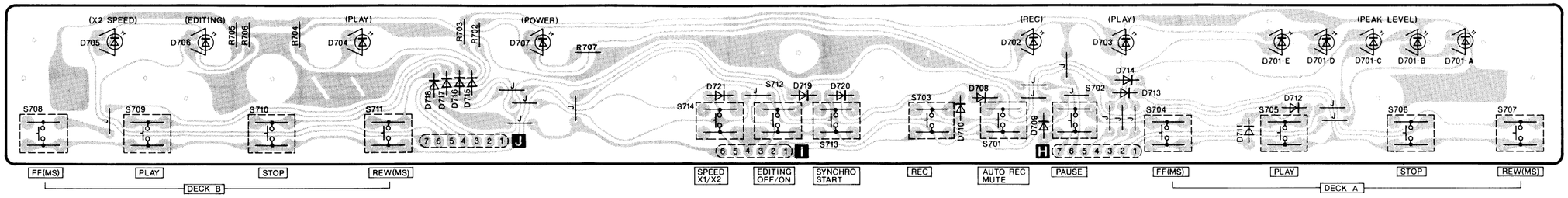
[EG] only



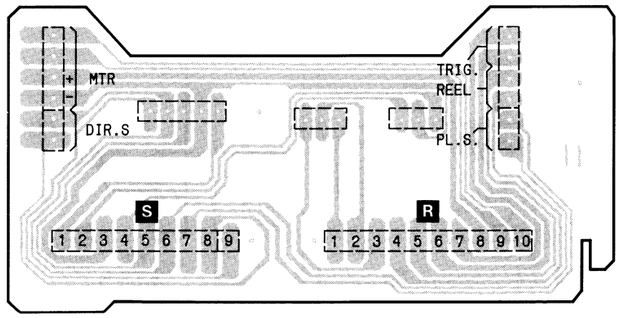
TP4 HIGH SPEED ADJ.

TP3 TEST POINT

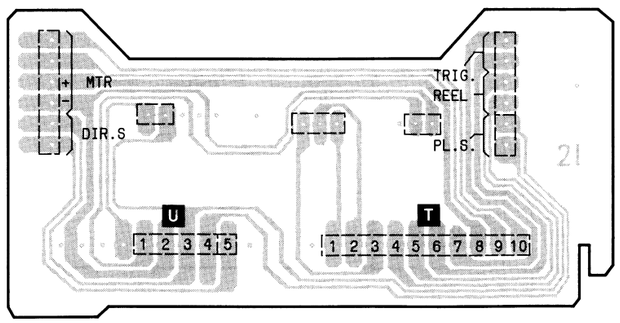
II OPERATION SW P.C.B.



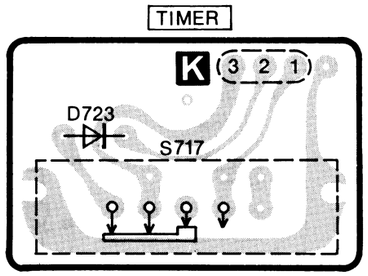
III MECHANISM P.C.B. (DECK A)



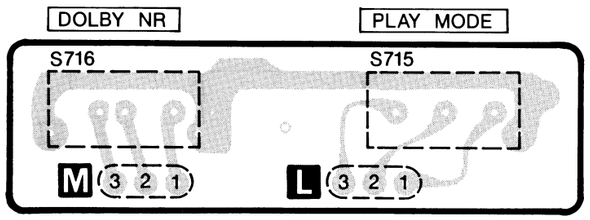
IV MECHANISM P.C.B. (DECK B)



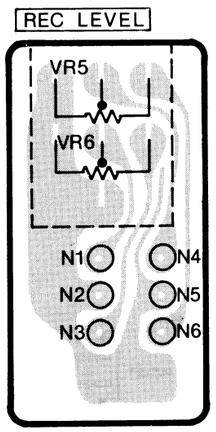
V TIMER SW P.C.B.



VI NR/MODE SW P.C.B.



VII VR P.C.B.



I MAIN CIRCUIT

Q3,4
2SJ40CD
R/P MUTE

Q5,6
2SK381
SWITCHING
X1/X2 DRIVE

PLAYBACK GAIN
ADJ. (R ch)

IC1
AN7016K
PB/REC. AMP.
PLAYBACK
GAIN ADJ.
(L ch)

IC2
MN6634
DECK A/B
SELECTOR

Q19
DTA114ESTP
PLAYBACK
AMP.

Q20
DTA114ESTP
TAPE SELECTOR

Q17,18
2SD1330R
REC. MUTE

Q23
DTA114ESTP
REC. MUTE

Q24
DTA114ESTP
REC. CONTROL

Q28
DTA114ESTP
REC. CONTROL

Q22
DTA114ESTP
X2 SPEED
CONTROL

OVERALL GAIN ADJ.

DECK B
PLAYBACK HEAD

DECK A
REC./PLAYBACK HEAD

Q1,2
2SA1115EF
SWITCHING
X2/OFF

Q15,16
2SC2603EFG
NORMAL/ON

Q13,14
2SC2603EFG
METAL/ON

Q11,12
2SC2603EFG
X2/ON

Q9,10
2SA1115EF
METAL/OFF

Q7,8
2SA1115EF
X2/OFF

Q5
(-3.4V)
-3.8V

[EG] only
AC OUTLET
AC IN
220V
50/60Hz
T601
F3
T2A
S601
C601
0.01

DECK A
ERASE
HEAD

OVERALL
FREQUENCY
RESPONSE
ADJ.

TP1 ERASE CURRENT
ADJ. TEST POINT

Q301,302
2SC2603EFG
BIAS OSC

Q301
Q302

Q304
2SD1858QR
AUTO TAPE
SELECTOR

Q305
2SB1237QR
BIAS CONTROL

Q303
2SB1237QR
POWER AMP.

Q25
2SA1115EF
AUTO TAPE
SELECTOR

ERASE
CURRENT
ADJ.

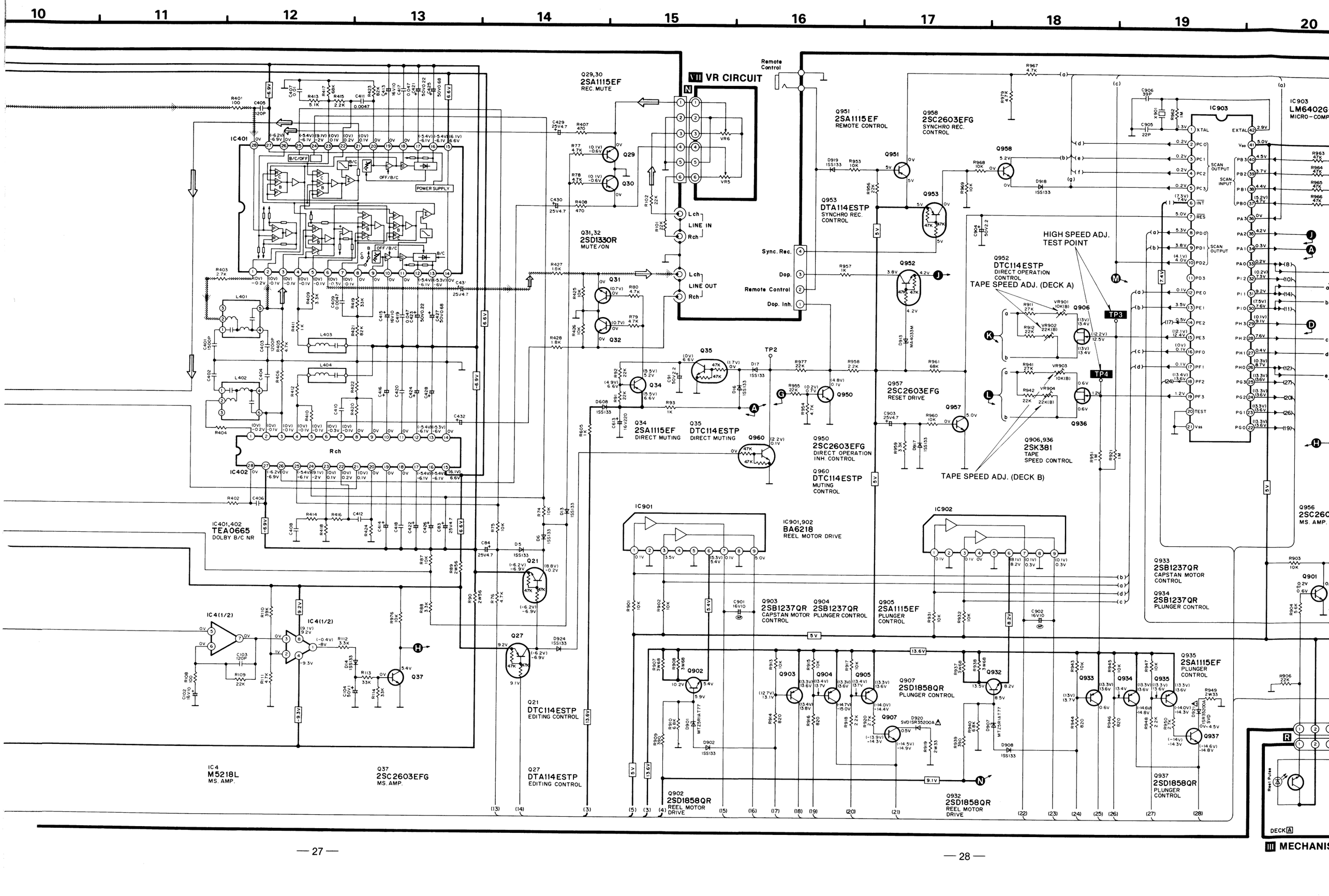
[E, EH, EK, XA, XL, XB] areas
POWER
SUPPLY
S602
S603
F1
T800mA
F2
T800mA

Q601
2SD1858QR
REGULATOR

Q602
2SB1237QR
REGULATOR

Q603,604
2SD1858QR
REGULATOR

Q26
2SD1330R
DECK A/B
SELECTOR


10
11
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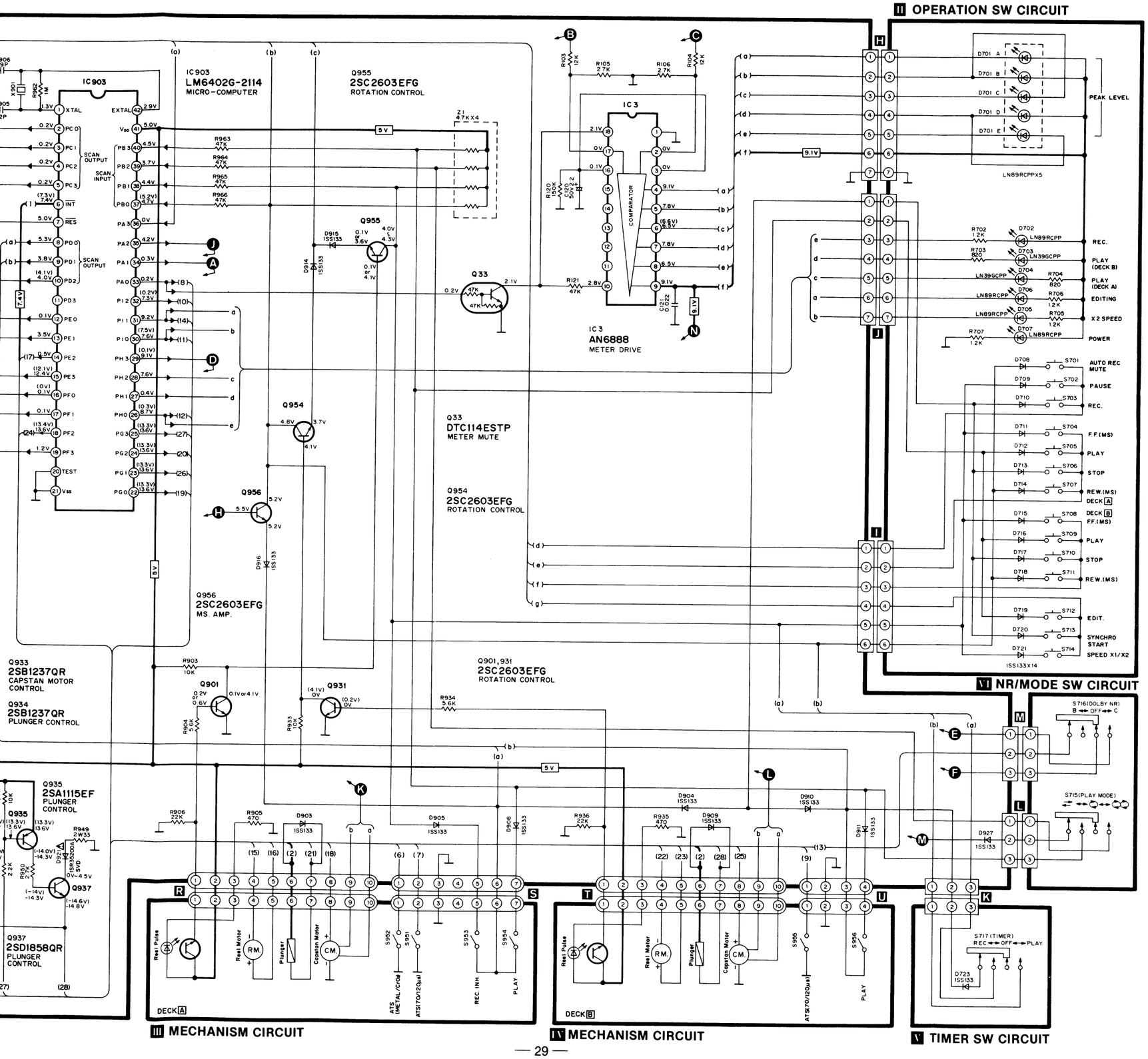
16
17
18
19
20
VII VR CIRCUIT
Remote Control
Sync. Rec.
Dop.
Remote Control
Dop. Inh.
Lch
LINE IN
Rch
Lch
LINE OUT
Rch
Q29,30
2SA1115EF
REC. MUTE
Q31,32
2SD1330R
MUTE/ON
Q951
2SA1115EF
REMOTE CONTROL
Q958
2SC2603EFG
SYNCHRO REC. CONTROL
Q953
DTA114ESTP
SYNCHRO REC. CONTROL
Q952
DTC114ESTP
DIRECT OPERATION CONTROL
TAPE SPEED ADJ. (DECK A)
TAPE SPEED ADJ. (DECK B)
HIGH SPEED ADJ. TEST POINT
TP2
TP3
TP4
Q906
Q936
Q906,936
2SK381
TAPE SPEED CONTROL
Q957
2SC2603EFG
RESET DRIVE
Q950
2SC2603EFG
DIRECT OPERATION INH. CONTROL
Q960
DTC114ESTP
MUTING CONTROL
Q34
2SA1115EF
DIRECT MUTING
Q35
DTC114ESTP
DIRECT MUTING
IC903
LM6402G
MICRO-COMP
SCAN OUTPUT
SCAN INPUT
IC401
IC401,402
TEA0665
DOLBY B/C NR
IC402
IC4(1/2)
IC4
M5218L
MS. AMP.
Q37
2SC2603EFG
MS. AMP.
Q27
DTA114ESTP
EDITING CONTROL
Q21
DTC114ESTP
EDITING CONTROL
IC901
IC901,902
BA6218
REEL MOTOR DRIVE
IC902
Q903
2SB1237QR
CAPSTAN MOTOR CONTROL
Q904
2SB1237QR
PLUNGER CONTROL
Q905
2SA1115EF
PLUNGER CONTROL
Q907
2SD1858QR
PLUNGER CONTROL
Q902
2SD1858QR
REEL MOTOR DRIVE
Q932
2SD1858QR
REEL MOTOR DRIVE
Q933
2SB1237QR
CAPSTAN MOTOR CONTROL
Q934
2SB1237QR
PLUNGER CONTROL
Q935
2SA1115EF
PLUNGER CONTROL
Q937
2SD1858QR
PLUNGER CONTROL
Q956
2SC260
MS. AMP.
Q901
Reel Pulse
DECK A
POWER SUPPLY
B/C/OFF
OFF/B/C
B/C
III MECHANIS



■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

- **S601** : Power switch in "**off**" position.
- **S603** : Voltage selector in "**240V**" position ([XA, XB] area only).
- **S701** : DECK [A] Auto rec. mute switch in "**off**" position.
- **S702** : DECK [A] Pause switch in "**off**" position.
- **S703** : DECK [A] Rec. switch in "**off**" position.
- **S704** : DECK [A] FF (MS) switch in "**off**" position.
- **S705** : DECK [A] Play switch in "**off**" position.
- **S706** : DECK [A] Stop switch in "**off**" position.
- **S707** : DECK [A] Rew (MS) switch in "**off**" position.
- **S708** : DECK [B] FF (MS) switch in "**off**" position.
- **S709** : DECK [B] Play switch in "**off**" position.
- **S710** : DECK [B] Stop switch in "**off**" position.
- **S711** : DECK [B] Rew (MS) switch in "**off**" position.
- **S712** : Editing switch in "**off**" position.
- **S713** : Synchro start switch in "**off**" position.
- **S714** : Editing tape speed selector in "**X1**" position.
- **S715** : Playback mode selector in "➡" position.
- **S716** : Dolby NR switch in "**off**" position.
- **S717** : Timer stand-by switch in "**off**" position.
- **S951** : DECK [A] ATS (70/120μs) switch in "**off**" position.
- **S952** : DECK [A] ATS (Metal CrO_2) switch in "**off**" position.
- **S953** : DECK [A] Rec. inhibit switch in "**off**" position.
- **S954** : DECK [A] Play switch in "**off**" position.
- **S955** : DECK [B] ATS (70/120μs) switch in "**off**" position.
- **S956** : DECK [B] Play switch in "**off**" position.

- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
  1K=1,000 (Ω), 1M=1,000k (Ω)
- Capacity are in micro-farads (μF) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.
  ( )..... Voltage values at record mode.
  For measurement us EVM.
- Important safety notice
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- (—□—) indicates B (bias).
- (▒▒▒) indicates the flow of the playback signal.
- (⟹) indicates the flow of the record signal.

∗ Caution!

IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

∗ Cover the parts boxes made of plastics with aluminum foil.
∗ Ground the soldering iron.
∗ Put a conductive mat on the work table.
∗ Do not touch the legs of IC or LSI with the fingers directly.

■ SPECIFICATIONS

∗ Input level control...MAX

Playback S/N ratio ∗ Test tape...QZZCFM	Greater than 45dB
Overall distortion ∗ Test tape ...QZZCRA for Normal	Normal... Less than 4.0%
Overall S/N ratio ∗ Test tape...QZZCRX	Greater than 45dB

■ REPLACEMENT PARTS LIST

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

* Bracketed indications in Ref. No. columns specify the area.
Parts without these indications can be used for all areas.

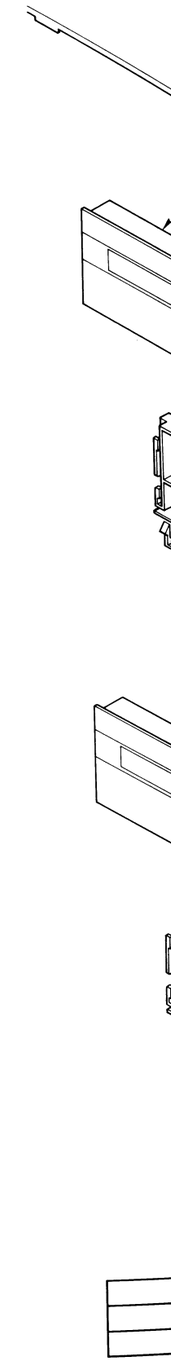
Ref. No.	Part No.	Part Code	Description
INTEGRATED CIRCUITS			
IC1	AN7016K	001 061 4629 4	I.C. PB/REC AMP.
IC2	MN6634	001 061 0884 7	I.C. SWITCH
IC3	AN6888	001 060 7693 9	I.C. METER DRIVE
IC4	M5218L	001 060 3798 7	I.C. OPERATION AMP.
IC401, IC402	TEA0665	001 060 7933 2	I.C. DOLBY NR
IC901, IC902	BA6218	001 061 1421 0	I.C. MOTOR DRIVE
IC903	LM6402G-2114	001 061 5318 2	INTEGRATED CIRCUIT
TRANSISTORS			
Q1, Q2	2SA1115EF	001 030 4055 3	TRANSISTOR
Q3, Q4	2SJ40CD	001 030 2807 5	TRANSISTOR
Q5, Q6	2SK381	001 030 4439 1	TRANSISTOR
Q7, Q8	2SA1115EF	001 030 4055 3	TRANSISTOR
Q9, Q10	2SA1115EF	001 030 4055 3	TRANSISTOR
Q11, Q12	2SC2603EFG	001 030 4301 8	TRANSISTOR
Q13, Q14	2SC2603EFG	001 030 4301 8	TRANSISTOR
Q15, Q16	2SC2603EFG	001 030 4301 8	TRANSISTOR
Q17, Q18	2SD1330R	001 030 2521 6	TRANSISTOR
Q19, Q20	DTA114ESTP	001 030 5275 9	TRANSISTOR
Q21	DTC114ESTP	001 030 5025 5	TRANSISTOR
Q22, Q23	DTA114ESTP	001 030 5275 9	TRANSISTOR
Q24	DTA114ESTP	001 030 5275 9	TRANSISTOR
Q25	2SA1115EF	001 030 4055 3	TRANSISTOR
Q26	2SD1330R	001 030 2521 6	TRANSISTOR
Q27, Q28	DTA114ESTP	001 030 5275 9	TRANSISTOR
Q29, Q30	2SA1115EF	001 030 4055 3	TRANSISTOR
Q31, Q32	2SD1330R	001 030 2521 6	TRANSISTOR
Q33	DTC114ESTP	001 030 5025 5	TRANSISTOR
Q34	2SA1115EF	001 030 4055 3	TRANSISTOR
Q35	DTC114ESTP	001 030 5025 5	TRANSISTOR
Q37, Q301	2SC2603EFG	001 030 4301 8	TRANSISTOR
Q302	2SC2603EFG	001 030 4301 8	TRANSISTOR
Q303	2SB1237QR	001 030 7423 7	TRANSISTOR
Q304	2SD1858QR	001 030 7425 5	TRANSISTOR
Q305	2SB1237QR	001 030 7423 7	TRANSISTOR
Q601	2SD1858QR	001 030 7425 5	TRANSISTOR
Q602	2SB1237QR	001 030 7423 7	TRANSISTOR
Q603, Q604	2SD1858QR	001 030 7425 5	TRANSISTOR
Q901	2SC2603EFG	001 030 4301 8	TRANSISTOR
Q902	2SD1858QR	001 030 7425 5	TRANSISTOR
Q903, Q904	2SB1237QR	001 030 7423 7	TRANSISTOR
Q905	2SA1115EF	001 030 4055 3	TRANSISTOR
Q906	2SK381	001 030 4439 1	TRANSISTOR
Q907	2SD1858QR	001 030 7425 5	TRANSISTOR
Q931	2SC2603EFG	001 030 4301 8	TRANSISTOR
Q932	2SD1858QR	001 030 7425 5	TRANSISTOR
Q933, Q934	2SB1237QR	001 030 7423 7	TRANSISTOR
Q935	2SA1115EF	001 030 4055 3	TRANSISTOR
Q936	2SK381	001 030 4439 1	TRANSISTOR
Q937	2SD1858QR	001 030 7425 5	TRANSISTOR
Q950	2SC2603EFG	001 030 4301 8	TRANSISTOR
Q951	2SA1115EF	001 030 4055 3	TRANSISTOR
Q952	DTC114ESTP	001 030 5025 5	TRANSISTOR
Q953	DTA114ESTP	001 030 5275 9	TRANSISTOR
Q954, Q955	2SC2603EFG	001 030 4301 8	TRANSISTOR
Q956, Q957	2SC2603EFG	001 030 4301 8	TRANSISTOR
Q958	2SC2603EFG	001 030 4301 8	TRANSISTOR
Q960	DTC114ESTP	001 030 5025 5	TRANSISTOR
DIODES			
D1, D2	1SS133	001 032 3324 5	DIODE
D3, D5	1SS133	001 032 3324 5	DIODE
D6, D9	1SS133	001 032 3324 5	DIODE
D10, D12	1SS133	001 032 3324 5	DIODE
D13, D14	1SS133	001 032 3324 5	DIODE
D16, D17	1SS133	001 032 3324 5	DIODE
D301, D302	1SS133	001 032 3324 5	DIODE
D303, D304	1SS133	001 032 3324 5	DIODE
D601, D602 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER
D603, D604 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER
D605 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER
D606, D607	1SS133	001 032 3324 5	DIODE
D608	1SS133	001 032 3324 5	DIODE
D609, D610	MTZ10BT77	001 032 7571 6	DIODE
D611	MTZ10BT77	001 032 7571 6	DIODE
D612	MTZ5R6B	001 032 9506 7	DIODE
D701A, D701B	LN89RCPP	001 032 7930 3	LED
D701C, D701D	LN89RCPP	001 032 7930 3	LED
D701E, D702	LN89RCPP	001 032 7930 3	LED
D703, D704	LN39GCPP	001 032 5729 0	LED
D705, D706	LN89RCPP	001 032 7930 3	LED
D707	LN89RCPP	001 032 7930 3	LED
D708, D709	1SS133	001 032 3324 5	DIODE
D710, D711	1SS133	001 032 3324 5	DIODE
D712, D713	1SS133	001 032 3324 5	DIODE
D714, D715	1SS133	001 032 3324 5	DIODE
D716, D717	1SS133	001 032 3324 5	DIODE
D718, D719	1SS133	001 032 3324 5	DIODE
D720, D721	1SS133	001 032 3324 5	DIODE
D723	1SS133	001 032 3324 5	DIODE
D901	MTZ5R1AT77	001 033 0273 6	DIODE
D902, D903	1SS133	001 032 3324 5	DIODE
D904, D905	1SS133	001 032 3324 5	DIODE
D906	1SS133	001 032 3324 5	DIODE
D907	MTZ5R1AT77	001 033 0273 6	DIODE
D908, D909	1SS133	001 032 3324 5	DIODE
D910, D911	1SS133	001 032 3324 5	DIODE
D912	1SS133	001 032 3324 5	DIODE
D913	MA4033M	001 032 5623 9	DIODE
D914, D915	1SS133	001 032 3324 5	DIODE
D916, D917	1SS133	001 032 3324 5	DIODE
D918, D919	1SS133.	001 032 3324 5	DIODE
D920, D921 ⚠	SVD1SR35200A	001 032 3951 4	RECTIFIER
D924, D927	1SS133	001 032 3324 5	DIODE
VARIABLE RESISTORS			
VR1, VR2	EVND4AA00B24	001 180 2244 1	V.R., 20kΩ (B)
VR3, VR4	EVND4AA00B24	001 180 2244 1	V.R., 20kΩ (B)
VR5, VR6	EVJRKA025A54	001 174 8992 4	V.R., 50kΩ (B)
VR7, VR8	EVND4AA00B24	001 180 2244 1	V.R., 20kΩ (B)
VR11, VR12	EVND4AA00B15	001 180 2243 2	V.R., 100kΩ (B)
VR303	EVND4AA00B53	001 180 2319 9	V.R., 5KΩ(B)
VR901	EVND4AA00B14	001 180 2242 3	V.R., 10KΩ(B)
VR902	EVN4LCA00B24	001 180 3198 6	V.R., 20kΩ (B)
VR903	EVND4AA00B14	001 180 2242 3	V.R., 10KΩ(B)
VR904	EVN4LCA00B24	001 180 3198 6	V.R., 20kΩ (B)
COILS AND TRANSFORMERS			
L1, L2	SLQX272-1YT	001 211 0649 2	CHOCK COIL
L3, L4	SLQX303-1K	001 211 1756 6	CHOKE COIL
L401, L402	QLB40048	001 210 7275 9	COIL
L403, L404	SLM1B8-K	001 211 2731 1	MPX COIL
T301	QLB0202	001 210 9090 8	COIL
T601 [EG] ⚠	SLT5V14-S	001 202 9050 2	POWER TRANSFORMER
COMPONENT COMBINATIONS			
Z1	EXBF5E472J8R	001 230 2223 9	COMPONENT COMBINATION
OSCILLATORS			
X901	SVFCSA400MG	001 241 1076 5	CERAMIC FILTER
FUSES			
F1, F2 ⚠	XBA2C08TB0	002 380 1460 7	250V, T800mA
F3 [EG] ⚠	XBA2C20TB0	002 380 1352 0	250V, T2A
SWITCHES			
S601 [EG] ⚠	ESB8249V	003 435 5877 0	POWER SWITCH
S601 ⚠	SSH1226	003 435 6277 4	POWER SWITCH
[E, EH, EK, XA, XL, XB]			
S701, S702	EVQQAC05G	003 439 2072 1	SW
S703, S704	EVQQAC05G	003 439 2072 1	SW
S705, S706	EVQQAC05G	003 439 2072 1	SW
S707, S708	EVQQAC05G	003 439 2072 1	SW
S709, S710	EVQQAC05G	003 439 2072 1	SW
S711, S712	EVQQAC05G	003 439 2072 1	SW
S713, S714	EVQQAC05G	003 439 2072 1	SW
S715, S716	SSS157	003 431 3020 9	SWITCH SLIDE
S717	SSS179	003 431 3923 9	SLIDE SWITCH

■ REPLACEMENT PARTS LIST

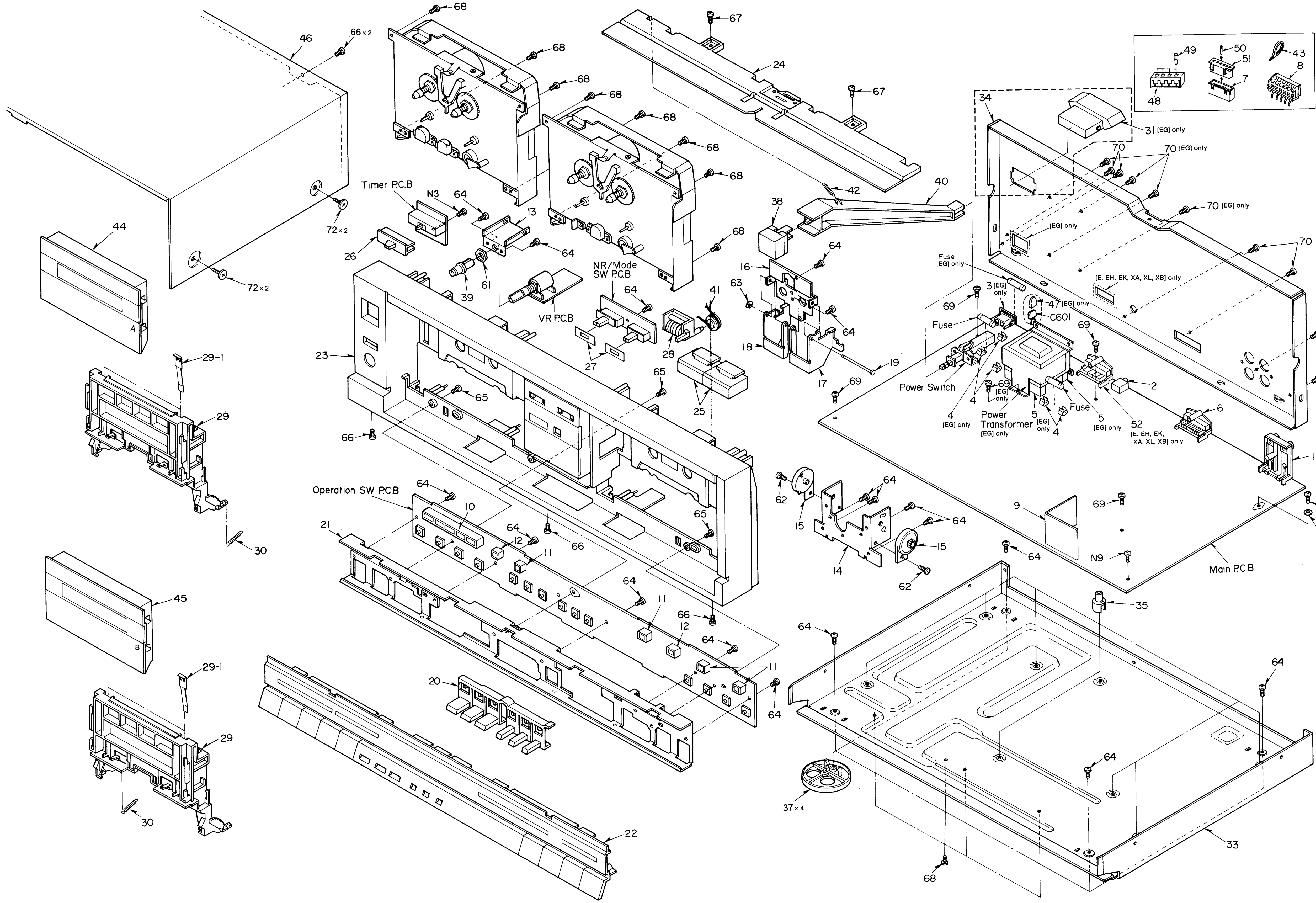
Ref. No.	Part No.	Part Code	Description
CABINET AND CHASSIS			
1	SJF3057N	003 410 3829 3	TERMINAL BOARD
2	SJJ130-2	003 400 7317 2	JACK
3 [EG] ⚠	SJS9236	003 403 4660 7	AC SOCKET
4	QTF1054	003 415 0168 4	FUSE HOLDER
5 [EG]	SJS703	003 403 7104 8	CONNECTOR
6	SJS804	003 403 4910 8	CONNECTOR
7	SJT3213	003 410 6011 5	CONNECTOR
7	SJT3319	003 403 3892 7	CONNECTOR
7	SJT3511	003 403 3893 6	CONNECTOR
7	SJT3611	003 410 6000 8	CONNECTOR
8	SJT30340LX-V	003 410 6075 9	LUG TERMINAL
8	SJT30640LX-V	003 410 6149 8	CONNECTOR
8	SJT30740LX-V	003 410 5990 7	LUG TERMINAL
9	SMCM14	016 601 0645 5	SHIELD COVER
10	LN058367P	001 032 9434 6	DIODE, GAASP
11	LN018365P	001 032 9923 4	DIODE, GAASP
12	LN013365P	001 032 9431 9	DIODE, GAASP
13	SUW3075	016 650 5348 6	ANGLE
14	SMQ30042	016 650 5347 7	ANGLE
15	SMQSX840-KN	016 745 0225 0	GEAR
16	SUW3061	016 650 5345 9	ANGLE
17	SMQ30043	016 718 3375 8	ANGLE
18	SMQ30044	016 718 3374 9	ANGLE
19	SUX58	016 634 0144 8	BRACING STRUT
20	SBC934	016 702 6947 8	BUTTON
21	SUW3060	016 650 5346 8	ANGLE
22	SGYSX844—KE1	016 840 7813 6	SUB PANEL
[E, EG, EH, XA, XL, XB]			
22 [EK]	SGYSX844—KK1		FRONT PANEL (K)
23	SGYSX844—KE	016 840 7814 5	FRONT PANEL (K)
[E, EG, EX, XA, XL, XB]			
23 [EK]	SGYSX844—KK		FRONT PANEL (K)
24	SGX9030	016 846 3729 7	SPACER
25	SBC935	016 702 6946 9	BUTTON
26	SBD143	016 700 1971 8	KNOB
27	SHR5312	016 652 0550 6	SPACER
28	SJN25	016 892 0127 9	TAPE COUNTER
29	SGXSX844—KE		CASSETTE HOLDER
29-1	QBP2006A	015 727 0706 8	SPRING
30	SUS851	016 726 0931 8	SPRING
31 [EG] ⚠	SJS9225	003 400 3946 5	AC OUTLET
32	SJS9332A	003 403 7376 6	CONNECTOR
EK			
33	SKUSX844-KE		BOTTOM BOARD
34	SGP7060—1B		REAR PANEL
[E, EH, XA, XL, XB]			
34	SGP7060—1C		REAR PANEL
EK			
34 [EG]	SGP7060—2E		REAR PANEL
35	SHE187-1	016 918 0584 9	SPACER
37	SKL307	016 828 0325 7	FOOT
38	SBC666-1	016 702 6076 0	BUTTON
39	SBN1222	016 700 1970 9	KNOB
40	SUB264	016 712 0354 5	ROD
41	SMQ20020	016 754 0062 0	ANGULAR BELT
42	SUS852	016 726 0930 9	COIL SPRING
43	QTD1315	015 645 0197 2	CORD CLAMPER
44	SYKM39	016 820 0606 1	CASSETTE LID
45	SYKM40	016 820 0607 0	CASSETTE LID
46	SKC2070K96	016 800 3038 1	CABINET
47 [EG]	SMX897	016 600 0483 0	SHIELD SPACER
48	SJS5629	003 400 5917 2	CONNECTOR <6P>
48	SJS5811	003 400 5930 5	CONNECTOR <8P>
49, 50	SJT783	003 410 6001 7	CONTACT
51	SJS5215	003 400 5923 4	CONNECTOR <2P>
51	SJS5331	003 400 5924 3	CONNECTOR <3P>
51	SJS5523	003 400 5916 3	CONNECTOR <5P>
51	SJS5629	003 400 5917 2	CONNECTOR <6P>
51	SJS5811	003 400 5930 5	CONNECTOR <8P>
52	SJS306		CONNECTOR
[E, EH, EK, XA, XL, XB]			
SCREWS, WASHERS & NUTS			
61	XNS7	005 507 1202 8	NUT
62	XTS3+8J	005 501 0712 5	SCREW
63	XUC2FT	005 512 0126 6	E-RING
64	XTB3+8J	005 501 1535 0	SCREW
65	XTB3+12J	005 501 1534 1	SCREW
66	XTB3+8JFZ	005 501 0138 3	SCREW
67	XTB3+8FFR	005 501 3569 2	SCREW
68	XTB3+10JFR	005 501 2757 4	TAPPING SCREW
69	XTB3+20J	005 501 3410 4	SCREW
70	XTBS3+8JFZ1	005 501 2523 0	SCREW
71	XWA3B	005 513 1248 8	WASHER
72	SNE2129-1	005 500 7938 6	SCREW

Ref. No.	Part No.	Part Code	Description
PACKINGS			
P1	SPS4983	016 977 3319 1	PAD
P2	SPGM105	016 971 5058 5	PACKING CASE
E, EG, EH, XL, EK			
P2	SPGM107	016 971 5069 2	CARTON BOX
XA, XB			
P3	SPS4919-1	016 977 3273 8	PAD
P4	SPS4920	016 977 3266 7	PAD
P5	SPPM2	016 978 0536 1	PROTECTION COVER
ACCESSORIES			
A1	SQFM74	016 983 5214 5	INSTRUCTION BOOK
E, EH			
A1	SQFM75	016 983 5187 1	INSTRUCTION BOOK
EK			
A1	SQFM76	016 983 5210 9	INSTRUCTION BOOK
EG			
A1	SQFM77	016 983 5213 6	INSTRUCTION BOOK
XB			
A1	SQFM82	016 983 5212 7	INSTRUCTION BOOK
XA			
A1	SQFM83	016 983 5211 8	INSTRUCTION BOOK
XL			
A2 [EG] ⚠	SFDAC05E03	003 490 4809 5	POWER CORD
A3	SJP2264	003 492 5035 3	CORD
A4	SPBM9002		CONNECTION CORD
A5	QLGM0488		CONNECTION CORD
[E, EH, EK, XA, XL, XB]			

■ CABINE



CABINET PARTS LOCATION



72 72 66 64 64 65 68 61 64 64 66 68 68 64 65 68 66 65 64 68 63 67 64 62 64 64 69 67 64 62 68 69 64 69 64 69 64 70 70 70 64 70 71 69 70
44 45 46 39 41 37 38 42 40 34 34 47 31 43 32 35 31 48 49 33 50 51 43
30 29-1 29 30 21 23 26 20 10 12 13 11 27 22 11 28 12 25 16 18 11 24 15 17 14 19 15 4 3 9 5 4 5 2 6 7 8 1

Printed in Japan
H870507300 MY/IM/AM

ORDER NO. HAD8711338S8

Service Manual

Supplement

Cassette Deck

Dolby B • C NR-Equipped
Stereo Double Cassette Deck

RS-X844

Please file and use this supplement manual together with the service manual for Model No. RS-X844, Order No. HAD8705131C8.

Note:

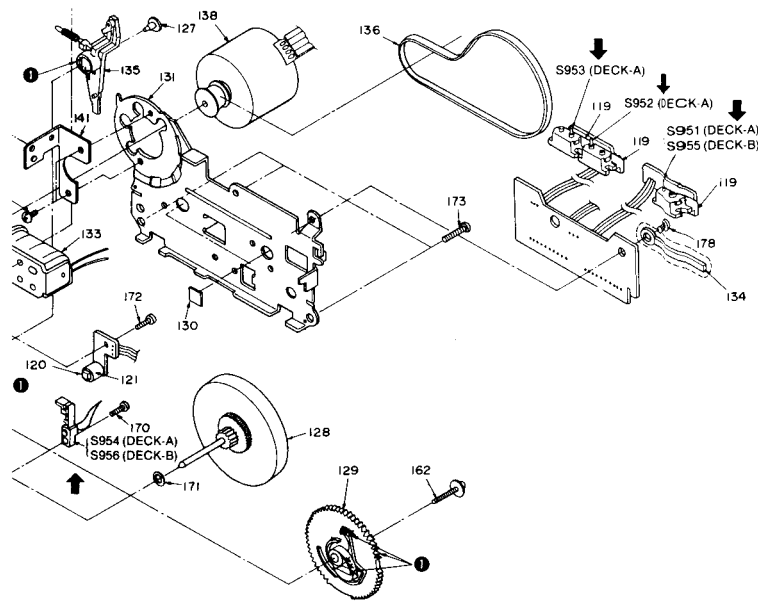
• Addition parts in the replacement parts list are shown by arrow (➡).

ADDITION

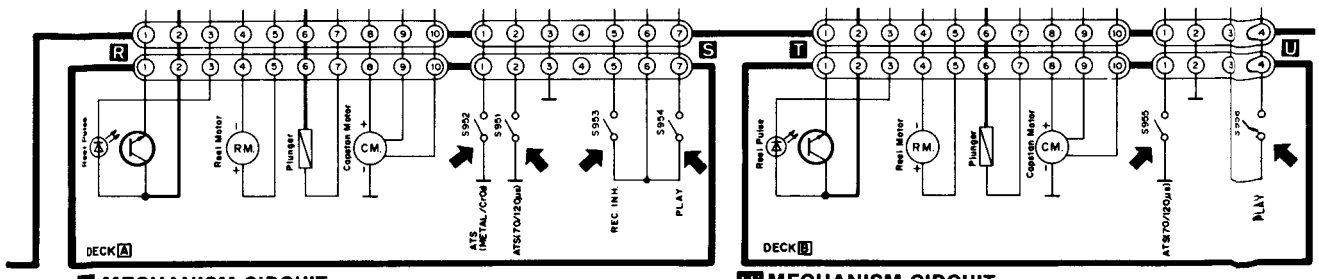
■ REPLACEMENT PARTS LIST

Ref No.	Part No.	Description
SWITCHES		
S951	SMQA1059	ATS (70/120μs)
S952	SMQA1059	ATS (M/cro$_2$)
S953	SMQA1040	REC
S954	SMQA1023	PLAY
S955	SMQA1059	ATS (70/120μs)
S956	SMQA1023	PLAY

• MECHANICAL PARTS LOCATION (PAGE 16)



• SCHEMATIC DIAGRAM (PAGE 29)



III MECHANISM CIRCUIT

IV MECHANISM CIRCUIT

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

Printed in Japan
H81 108350 IM

ORDER NO. HAD8705131C8-A

DEUTSCH

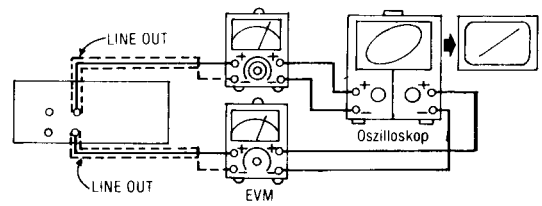
Verwenden Sie bitte diese Broschüre zusammen mit der Service-Anleitung für das Modell Nr. RS-X844.

■ MESSUNGEN UND EINSTELL METHODEN

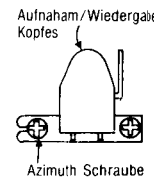
Meßinstrumente

- Elektronisches Voltmeter (EVM)
- Oszilloskop
- Digitaler Frequenzmesser
- Audiofrequenz-Oszillator
- Dämpfungswiderstand
- Gleichstrom-Voltmeter
- Widerstand (600Ω)

Kopfazimut-Justierung



1. Den Azimut-Justierungsteil (8kHz, −20dB) des Testbandes (QZZCFM) wiedergeben und die Winkel-justierungs-Einstellschraube so verstellen, daß der Ausgang vom linken und rechten Kanal maximal wird. (Wenn die Justierpositionen für den linken und rechten Kanal verschieden sind, ist eine Position zu finden, wo der Ausgang des linken und rechten Kanals ausgelichen ist, und dann ist die Justierung durchzuführen.)
2. Gleichzeitig eine Lissajous-Wellenform ziehen und Phasenablenkung eliminieren.
3. Nach erfolgter Justierung sind die Bandführungs-Höhen-und-Winkeljustlerschrauben zu sichern.



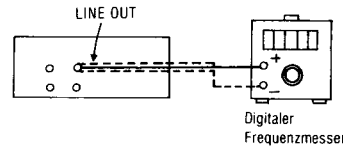
Bandgesch windigkeits-Justierung (DECK A, B)

—Schneller bandlauf—

1. Stellen Sie den Bandgeschwindigkeitswählschalter auf "X2" und erden Sie Deck B an TP4 und Deck A an TP3.
2. Spielen Sie den Mittelteil des Testbandes (QZZCWAT) ab.
3. Justieren Sie VR904 von Deck B und VR902 von Deck A so, daß die Abgabewerte innerhalb der Standardwerte liegen.

—Normaler Bandlauf—

4. Stellen Sie den Bandgeschwindigkeitswähischalter auf "X1" und unterbrechen Sie Deck B in TP4 und Deck A in TP3.
5. Spielen Sie den Mittelteil des Testbandes (QZZCWAT) ab.
6. Justieren Sie VR903 von Deck B und VR901 von Deck A so, daß die Abgabewerte innerhalb der Standardwerte Liegen.



Standardwert: 3000^{+15}_{-10}Hz (Normal), 6000±30Hz (Schnell)

Wiedergabe-Frequenzgang (DECK A, B)

1. Den Wiedergabe-Frequenzgangteil (315Hz, 12,5kHz~63Hz, −20dB) des Testbandes (QZZCFM) wiedergeben.
2. Überprüfen, ob der Frequenzgang innerhalb des in Abb. 2 für den linken und rechten Kanal gezeigten Bereichs liegt.

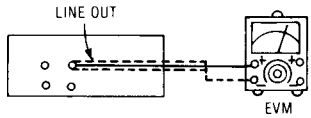


Abb. 1

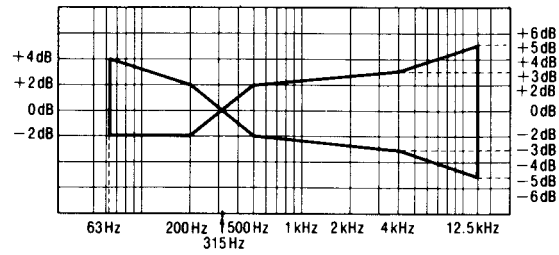


Abb. 2

Justierung des Wiedergabe-Verstärkungsgrades (DECK A, B)

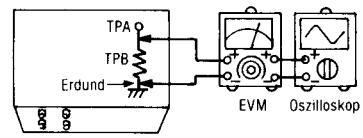
1. Der Testaufbau ist in Abb. 1 gezeigt.
2. Den für den Wiedergabe-Verstärkungsgrad justierten Teil (315Hz, 0dB) des Testbandes (QZZCFM) wiedergeben.
3. Den VR1, (linker Kanal) [[VR4 (rechter Kanal)]] für Deck B und den VR3 (linker Kanal) [[VR2 (rechter Kanal)]] für Deck A so justieren, daß die Ausgangsleistung dem Standard-Wert entspricht.

Standard-Wert: 0,4V±0,5dB

Löschstrom-Justierung (DECK A)

1. Eine Reineisenband-Cassette einsetzen.
2. Die Aufnahmetaste und die Pausentaste drücken.
3. Den VR303 so justieren, daß die Ausgangsleistung zwischen TP1 und Masse dem Standard-Wert entspricht.

Standard-Wert: 170±10mA (Metal), (170±10mV)



TPA: TP1
TPB: VR303

Gesamtfrequenzgang (DECK A)

1. Legen Sie eine normale Leerkassette (QZZCRA) ein und nehmen ein Signal (50Hz~12.5kHz) von 20dB auf, das durch das Referenzeingabepegelsignal (1kHz, −24dB) gedämpft wird.
2. Das in Schritt 1 aufgezeichnete Signal wiedergeben und prüfen, ob der Pegel jeder Ausgangsfrequenz im Bereich liegt, der in Abb. 4 im Vergleich zur Referenzfrequenz (1kHz) gezeigt wird.
3. Falls er nicht im Standard-Bereich liegt, ist der Vormagnetisierungsstrom mit VR11 (linker Kanal) [[VR12 (rechter Kanal)]] so zu justieren, daß der Frequenzpegel innerhalb des Standards zu liegen kommt.
   - Erhöhter Pegel im Frequenzbereich.....Den Vormagnetisierungsstrom erhöhen.
   - Reduzierter Pegel im Frequenzbereich.....Den Vormagnetisierungsstrom senken.
4. Anschließend das auf der CrO2-Leerband-Cassette (QZZCRX) und der Reineisenband-Leercassette (QZZCRZ) aufgezeichnete Signal auf 14kHz erhöhen und auf gleiche Weise justieren, wie vorgehend beschrieben. Dann überprüfen, ob der Frequenzpegel innerhalb des in Abb. 5 gezeigten Bereichs liegt.

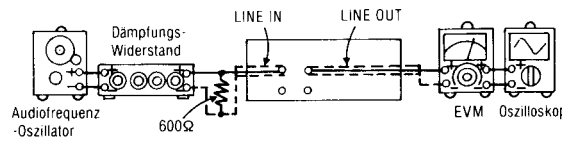


Abb. 3

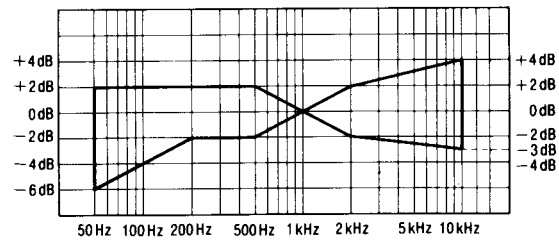


Abb. 4

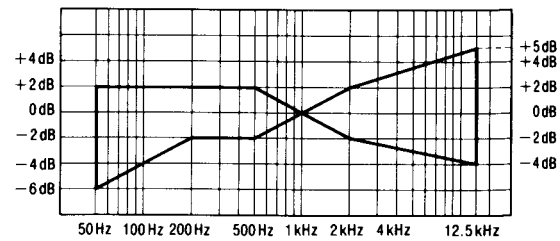


Abb. 5

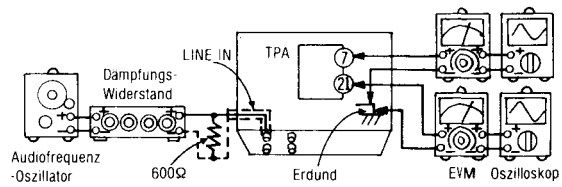
Justierung des Gesamtverstärkungsgrades (DECK A)

1. Der Testaufbau ist in Abb. 3 gezeigt.
2. Eine Normalband-Leercassette (QZZCRA) einsetzen und im Aufnahmepause-Zustand des Gerütes das Referenzsignal (1 kHz, −24 dB) eingeben.
3. Die Ausgangsleistung mit dem Dämpfungswiderstand auf 0.4 V justieren und dann aufnehmen.
4. Das in Schritt 3 aufgezeichnete Signal wiedergeben und überprüfen, ob die Ausgangsleistung dem Standard-Wert entspricht.
5. Falls sie nicht dem Standard-Wert entspricht, ist der VR7 (linker Kanal) [[VR8 (rechter Kanal)]] zu justieren, und dann sind die Schritte (2), (3) und (4) zu Wiederholen, bis die Ausgangsleistung dem Standard-Wert entspricht.

Standard-Wert: 0,4 V ± 0,5 dB

Dolby-Rauschunterdrückungs-Schaltkreis

1. Eine Normalband-Cassette einsetzen und im Aufnahmepause-Zustand des Gerätes ein 1 kHz-Signal eingeben.
2. Mit dem Dämpfungswiderstand so justieren, daß die Ausgangsleistung zwischen Anschluß ⑦ des IC401 (linker Kanal) [[IC402 (rechter Kanal)]] und Masse 12.3 mV beträgt.



TPA { **IC401 (Linker Kanal)** / **IC402 (Rechter Kanal)**

—Dolby B (Dolby-C) (Kodierungseigenschaft)—

3. Den Rauschunterdrückungs-Schaltkreis (NR) auf "Dolby B (Dolby C)" einstellen und das Eingangssignal auf 1 kHz, 5 kHz verändern.
4. Überprüfen, ob die Ausgangsleistung zwischen Anschluß ㉑ des IC401 (linker Kanal) [[IC402 (rechter Kanal)]] und Masse wie vorgeschrieben gegenüber dem Pegel im rauschunterdrückungsfreiem Zustand verändert wird.

Dolby-B:

Standard-Wert: 6 ± 2,5 dB (1 kHz), 8 ± 2,5 dB (5 kHz)

Dolby-C:

Standard-Wert: 11,5 ± 2,5 dB (1 kHz), 8,5 ± 2,5 dB (5 kHz)

FRANÇAIS

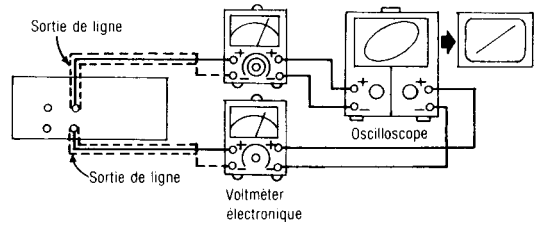
Ceci est à utiliser conjointement avec le manuel d'entretien du modèle No. RS-X844.

■ METHODES DES MEASURES ET REGLAGES

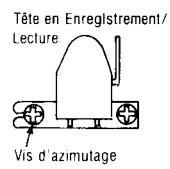
Appareils de mesurage

- Voltmètre électronique
- Oscilloscope
- Compteur de fréquence numérique
- Oscillateur de fréquence audio
- A.T.T. (Atténuateur)
- Voltmètre à C.C.
- Résistance (600Ω)

Réglage de l'angle des têtes de lecture



1. Faire jouer la partie réglée azimutale (8kHz, −20dB) de la bande d'essai (QZZCFM) et régler la vis de mise au point azimutale de telle sorte que les puissances de sortie du canal de gauche et du canal de droite soient au maximum. (Si les positions de réglage du canal de gauche et du canal de droite sont différentes, trouver une position où les puissances de sortie des canaux de gauche et de droite soient équilibrées, puis effectuer la mise au point.)
2. En même temps, établir une forme d'onde de Lissajous et éliminer la déviation de phase.
3. Aprés le règlage, bloquer les vis du réglage angulaire, et de la hauteur des guides de bande.



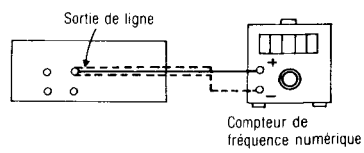
Réglage de la vitesse de défilement de la bande (PLATINE A, B)

—A grande vitesse—

1. Régler le commutateur de vitesse de défilement de la bande de montage sur "X2" et relier à la terre la platine B sur TP4 et la platine A sur TP3.
2. Faire jouer la partie centrale de la bande d'essai (QZZCWAT).
3. Ajuster la platine B sur VR904 et la platine A sur VR902 de telle sorte qu la puissance de sortie sortie en deçà de la normale.

—Vitesse normale—

4. Régler le commutateur de vitesse de défilement de la bande de montage sur "X1" et mettre hors circuit la platine B sur TP4 et la platine A sur TP3.
5. Faire jouer la partie centrale de la bande d'essai (QZZCWAT).
6. Ajuster la platine B sur VR903 et la platine A sur VR901 de telle sorte que la puissance de sortie soit en deçà de la normale.



Valeur standard: 3000^{+15}_{-10}Hz (normale); 6000±30Hz (élevée)

Réponse en fréquence de la lecture (PLATINE A, B)

1. Faire jouer la partie de la réponse en fréquence de la lecture (315Hz, 12,5kHz~63Hz, −20dB) de la bande d'essai (QZZCFM).
2. Vérifier que la fréquence soit en deçà de la plage montrée à la Fig. 2, à la fois pour le canal de gauche et le canal de droite.

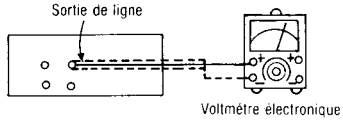


Fig. 1

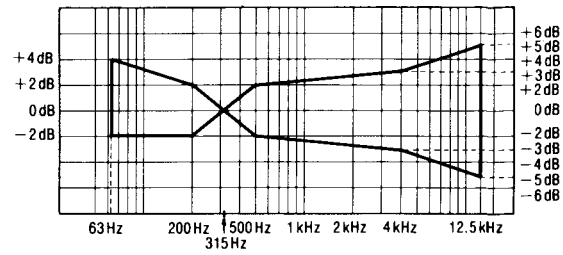


Fig. 2

Réglage d'amplification de la lecture (PLATINE A, B)

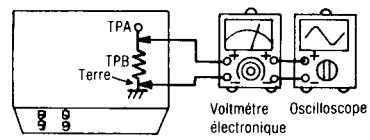
1. Le raccordement de l'équipement d'essai est montré à la Fig. 1.
2. Faire jouer la partie réglée d'amplification de la lecture (315Hz, 0dB) de la bande d'essai (QZZCFM).
3. Régler la platine B: VR1 (canal de gauche) [[VR4 (canal de droite)]] et la platine A: VR3, (canal de gauche) [[VR2 (canal de droite)]] de telle sorte que la puissance de sortie soit en deçà de la normale.

Valeur normalisée: 0,4V±0,5dB

Réglage de la tention d'effacement (PLATINE A)

1. Introduire la bande métallisée.
2. Appuyer sur les touches d'enregistent et d'intermission.
3. Régler VR303 de telle sorte que la puissance de sortie entre TP1 et la masse soit en deçà de la normale.

Valeur normalisée:
170±10mA (Métallisée) (170±10mV)



TPA: TP1
TPB: VR303

Réponse en fréquence globale (PLATINE A)

1. Installer une bande vierge normale (QZZCRA) et enregistrer en appliquant un signal (50Hz~12,5kHz), 20dB atténués à partir du signal du niveau d'entrée de référence (1kHz, −24dB).

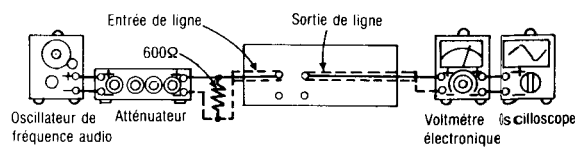


Fig. 3

2. Faire jouer le signal enregistré à l'étape 1 et vérifier que le niveau de chaque fréquence de sortie soit en deçà de la plage montrée à la Fig. 4 en comparaison avec la fréquence de référence (1kHz).
3. S'il n'est pas en deçà de la plage standard, régler le courant de polarisation avec VR11 (canal de gauche) [[VR12 (canal de droite)]] de telle sorte que le niveau de fréquence soit en deçà de la normale.
   - Niveau vers la haut dans la plage de fréquence élevée .....Augmenter le courant de polarisation.
   - Niveau vers le bas dans la plage de fréquence élevée.....Diminuer le courant de polarisation.
4. Aprés cela, amplifier le signal enregistré sur la bande vierge CrO2 (QZZCRX) et la bande vierge métallisée (QZZCRZ) jusqu'à 15kHz et régler de la même manièree que celle mentionné ci-dessus. Puis, vérifier que le niveau de fréquence soit en deçà de la plage montrée à la Fig. 5.

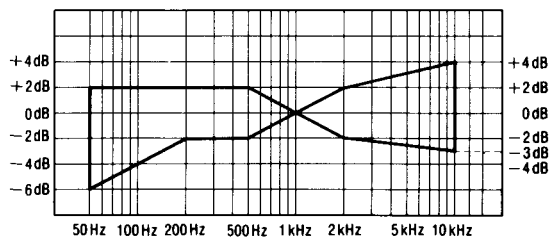


Fig. 4

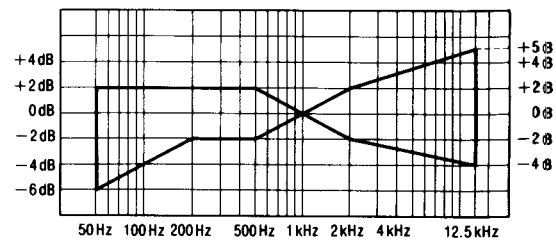


Fig. 5

Réglage d'amplification globale (PLATINE A)

1. Le raccordement de l'équipement d'essai est montré à la Fig. 3.
2. Installer une bande vierge normale (QZZCRA) et appliquer le signal de niveau d'entrée de référence (1 kHz, −24 dB) sur le mode d'intermission d'enregistrement.
3. Régler la puissance de sortie 0.4 V avec L'atténuateur, puis enregistrer.
4. Faire jouer le signal enregistré à l'étape 3 et vérifier que la puissance de sortie soit en deçà de la normale.
5. Si elle n'est pas en deçà de la normale, régler platine B: VR7 (canal de gauche) [[VR8 (canal de droite)]] et répéter les étapes (2), (3) et (4) jusqu'à ce que la puissance de sortie soit en deçà de la normale.

Valeur normalisée: 0,4 V ± 0,5 dB

Circuit de réduction des bruits Dolby

1. Installer une bande normale et appliquer un signal de 1 kHz sur le mode d'intermission d'enregistrement.
2. Régler avec l'atténuateur de telle sorte que la puissance de sortie entre la borne ⑦ de IC401 (canal de gauche) [[IC402 (canal de droite)]] et la masse soit de 12,3 mV.

— Dolby B (Caractéristiques de codage) —

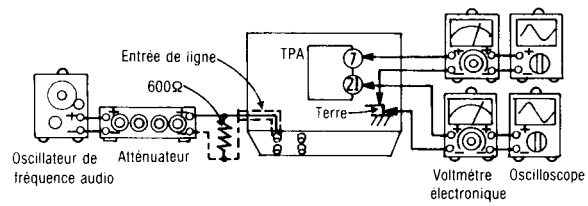
3. Régler le commutateur de réduction des bruits sur "Dolby B" et changer le signal d'entrée sur 1 kHz, 5 kHz.
4. Vérifier que la puissance de sortie entre la borne 21 de IC401 (canal de gauche) [[IC402 (canal de droite)]] et la masse change tel qu'il est spécifié à partir du niveau d'entrée sur le mode de sortie de réduction des bruits.

Valeur normalisée: 6 ± 2,5 dB (1 kHz), 8 ± 2,5 dB (5 kHz)

— Dolby C (Caractéristiques de codage) —

5. Régler le commutateur de réduction des bruits sur "Dolby C" et changer le signal d'entrée sur 1 kHz, 5 kHz.
6. Vérifier que la puissance de sortie entre la borne 21 de IC 401 (canal de gauche) [[IC402 (canal de droite)]] et la masse change tel qu'il est spécifié à partir du niveau d'entrée sur le mode de sortie de réduction des bruits.

Valeur normalisée: 11,5 ± 2,5 dB (1 kHz), 8,5 ± 2,5 dB (5 kHz)



TPA: { **IC401 (Canal de gauche)** / **IC402 (Canal de droite)**

ESPAÑOL

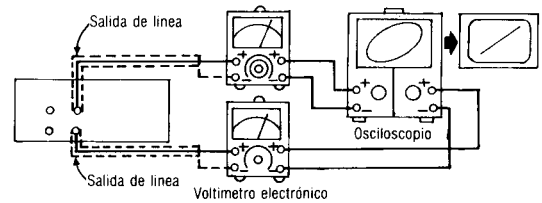
Sirvase utilizarse junto con manual de servicio para el model No. RS-X844.

■ METODOS DE AJUSTE Y MEDIDA

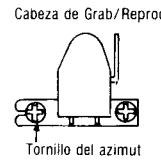
Instrumento de medición

- EVM (Voltimetro electrónico)
- Osciloscopio
- Frecuencimetro digital
- Oscilador AF
- ATT (Atenuador)
- Voltimetro CC
- Resistor (600Ω)

Ajuste acimutal de cabeza (PLATINA A, B)



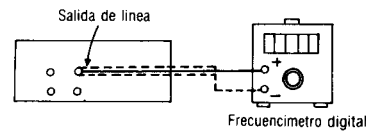
1. Reproducir la parte ajustada de acimut (8kHz, −20dB) de la cinta de prueba (QZZCFM) y regular el tornillo de ajuste de ángulo de manera que las salidas de CH-I y CH-D sean maximizadas. (Cuando las posiciones de ajuste sean diferentes de CH-I y CH-D, encontrar una posición donde las salidas de CH-I y CH-D estén equilibradas y, luego, hacer el ajuste.)
2. Al mismo tiempo, trazar una forma de onda de lissajous y eliminar la deflexión de fase.
3. Después del ajuste, fije los tornillos de ajuste de altura y ángulo de guía de cinta.



Ajuste de velocidad de cinta (PLATINA A, B)

—Alta velocidad—

1. Poner el conmutador de velocidad de cinta de compaginación en "X2" y poner a tierra la Platina B: TP4 y Platina A: TP3.
2. Reproducir la parte de en medio de la cinta de prueba (QZZWAT).
3. Ajustar la Platina B: VR904 y Platina A: VR902 de manera que la salida esté dentro de la estándar.



—Velocidad normal—

4. Poner el conmutador de velocidad de cinta de compaginación en "X1" y abra la Platina B: TP4 y Platina A: TP3.
5. Reproducir la parte de en medio de la cinta de prueba (QZZCWAT).
6. Ajustar la Platina B: VR903 y Platina A: VR901 de manera que la salida esté dentro de la estándar.

valor estándar: 3000^{+15}_{-10}Hz (normal) 6000±30Hz (alta)

Respuesta de frecuencia de reproducción (PLATINA A, B)

1. Reproducir la parte de respuesta de frecuencia de reproduc-ción (315Hz, 12,5kHz~63Hz, −20dB) de la cinta de prueba (QZZCFM).
2. Comprobar que la frecuencia esté dentro de la gama mostrada en la Fig. 2 tanto para CH-I como para CH-D.

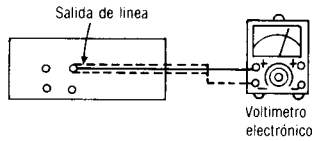


Fig. 1

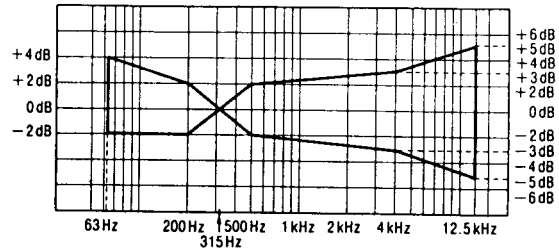


Fig. 2

Ajuste de ganancia de reproducción (PLATINA A, B)

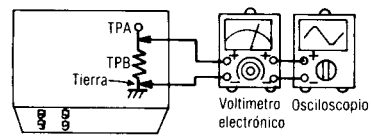
1. La conexión del equipo de prueba se muestra en la Fig. 1.
2. Reproducir la parte ajustada de la ganancia de reproducción (315Hz, 0dB) de la cinta de prueba (QZZCFM).
3. Ajustar la platina B: RV1 (CH-I) [[RV4 (CH-D)]] y la platina A: RV3, (CH-I) [[RV2 (CH-D)]] de manera que la salida esté dentro de la estandard.

Valor estandard: 0,4V±0,5dB

Ajuste de corriente de borrado (PLATINA A)

1. Insertar la cinta metálica.
2. Apretar los botones de grabación y pausa.
3. Ajustar RV303 de manera que la salida entre TP1 y tierra esté dentro de la estándar.

Valor estándar: 170±10mA (Metal) 170±10mV



TPA: TP1
TPB: RV303

Respuesta de frecuencia total (PLATINA A)

1. Poner una cinta virgen normal (QZZCRA) y grabar aplicando señal (50Hz~12.5kHz) 20dB atenuada de la señal de nivel de entrada de referencia (1kHz, −24dB).
2. Reproducir la señal grababa en el paso 1 y comprobar que el nivel de cada frecuencia de salida esté dentro de la gama mostrada en la Fig. 4 en comparación con la frecuencia de referencia (1kHz).

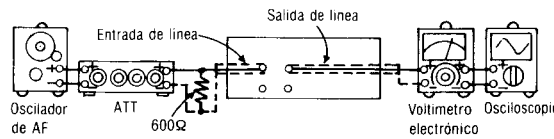


Fig. 3

3. Si no está dentro de la gama estandard, ajustar la corriente de polarización mediante RV11 (CH-I) [[RV12 (CH-D)]] de manera que el nivel de frecuencia esté dentro del estandard.
   - Subir el nivel en la gama de alta frecuencia.....Incrementar la corriente de polarización.
   - Bajar el nivel en la gama de alta frecuencia.....Disminuir la corriente de polarización.
4. Después de eso, incrementar la señal grabada en la cinta virgen CrO2 (QZZCRX) y la cinta virgen metálica (QZZCRZ) hasta 14kHz y ajustar de la misma manera como mencionado arriba y comprobar que el nivel de frecuencia esté dentro de la gama mostrada en la Fig. 5.

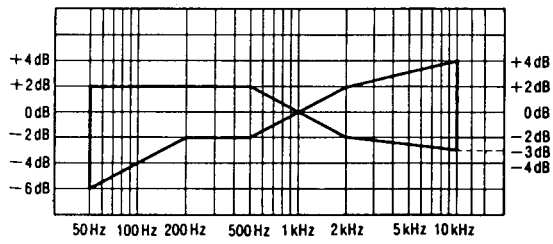


Fig. 4

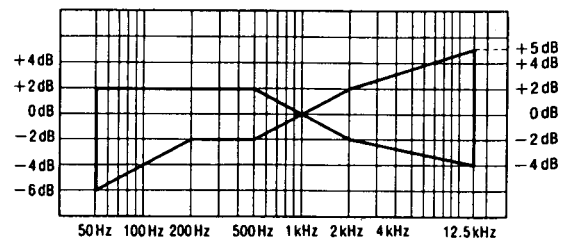


Fig. 5

Ajuste de ganancia total (PLATINA A)

1. La conexión del equipo de prueba se muestra en la Fig. 3.
2. Colocar una cinta virgen normal (QZZCRA) y aplicar la señal de nivel de entrada de referencia (1 kHz, −24 dB) en la modalidad de pausa de grabación.
3. Ajustar la salida 0,4 V mediante atenuador y, luego, grabar.
4. Reproducir la señal gradada en el paso 3 y comprobar que la salida esté dentro de la estandard.
5. Si no está dentro de la estandard, adjustar RV7 (CH-I) [[RV8 (CH-D)]] y repetir el paso (2), (3) y (4) hasta que la salida esté dentro de la estandard.

Valor estandard: 0,4 V ± 0,5 dB

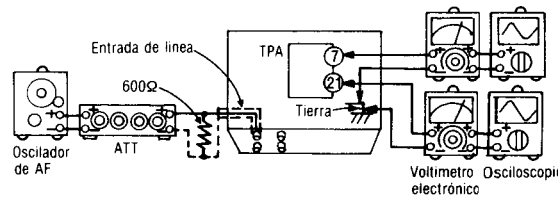
Circuito RR Dolby

1. Colocar una cinta normal y aplicar señal 1 kHz en la modalidad de pausa de grabación.
2. Ajustar mediante atenudador de manera que la salida entre terminal ⑦ de IC401 (CH-I) [[IC402 (CH-D)]] y tierra sea 12,3 mV.

—Dolby B (Codificar caracteristica)—

3. Poner el interruptor RR en "Dolby B" y cambiar la señal de entrada a 1 kHz, 5 kHz.
4. Comprobar que la salida entre terminal ㉑ de IC401 (CH-I) [[IC402 (CH-D)]] y tierra cambie como especificado por el nivel en la modalidad de salida RR.

Valor estandard: 6 ± 2,5 dB (1 kHz), 8 ± 2,5 dB (5 kHz)



TPA: { **IC401 (CH-I)** / **IC402 (CH-D)** }

—Dolby C (Condificar caracteristica)—

5. Poner el interruptor RR en "Dolby C" y cambiar la señal de entrada a 1 kHz, 5 kHz.
6. Comprobar que la salida entre terminal ㉑ de IC401 (CH-I) [[IC402 (CH-D)]] y tierra cambie como especificado por el nivel en la modalidad de salida RR.

Valor estandard: 11,5 ± 2,5 dB (1 kHz), 8,5 ± 2,5 dB (5 kHz)

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